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# Farmington Area Connectivity Study

## Capitol Region Council of Governments and Town of Farmington

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## 1.0 Introduction

The Farmington Area Connectivity Study was initiated by the Capitol Region Council of Governments (CRCOG) and the Town of Farmington to build upon decades of planning to assess the potential impacts of another north-south bridge across the Farmington River in Farmington, Connecticut.

As incredible of a resource as it is, the Farmington River does function as a barrier to connectivity and mobility in Farmington and other surrounding towns in the region. In Farmington, the Route 177 Unionville bridge is essentially the only vehicular connection, linking primary northbound and southbound traffic over the river. The resonant truss bridge has been a huge source of traffic congestion and flooding concerns over the years.

A new bridge is proposed to connect Monteith Drive from Route 4 (Farmington Avenue), north of the Farmington River, to New Britain Avenue, south of the Farmington River. The proposed bridge will provide resiliency and reprieve to the Farmington area by adding another connection across the river. It will also provide a critical link between the Farmington Town Complex (Town Hall, Town Library, and High School) to the Police Station, Community Center, Senior Citizen Center, and Public Works Facility. While the new bridge crossing will provide a direct connection with obvious traffic benefits to the immediate area, it will also have broader implications on regional traffic patterns in Farmington and the other towns in the region.

The Farmington Area Connectivity study consisted of several tasks, including field reconnaissance, data collection, review of existing roadway conditions and multimodal amenities, and assessment of existing and future traffic operations and development of alternatives. This report summarizes the analysis, findings, and recommendations of the study.

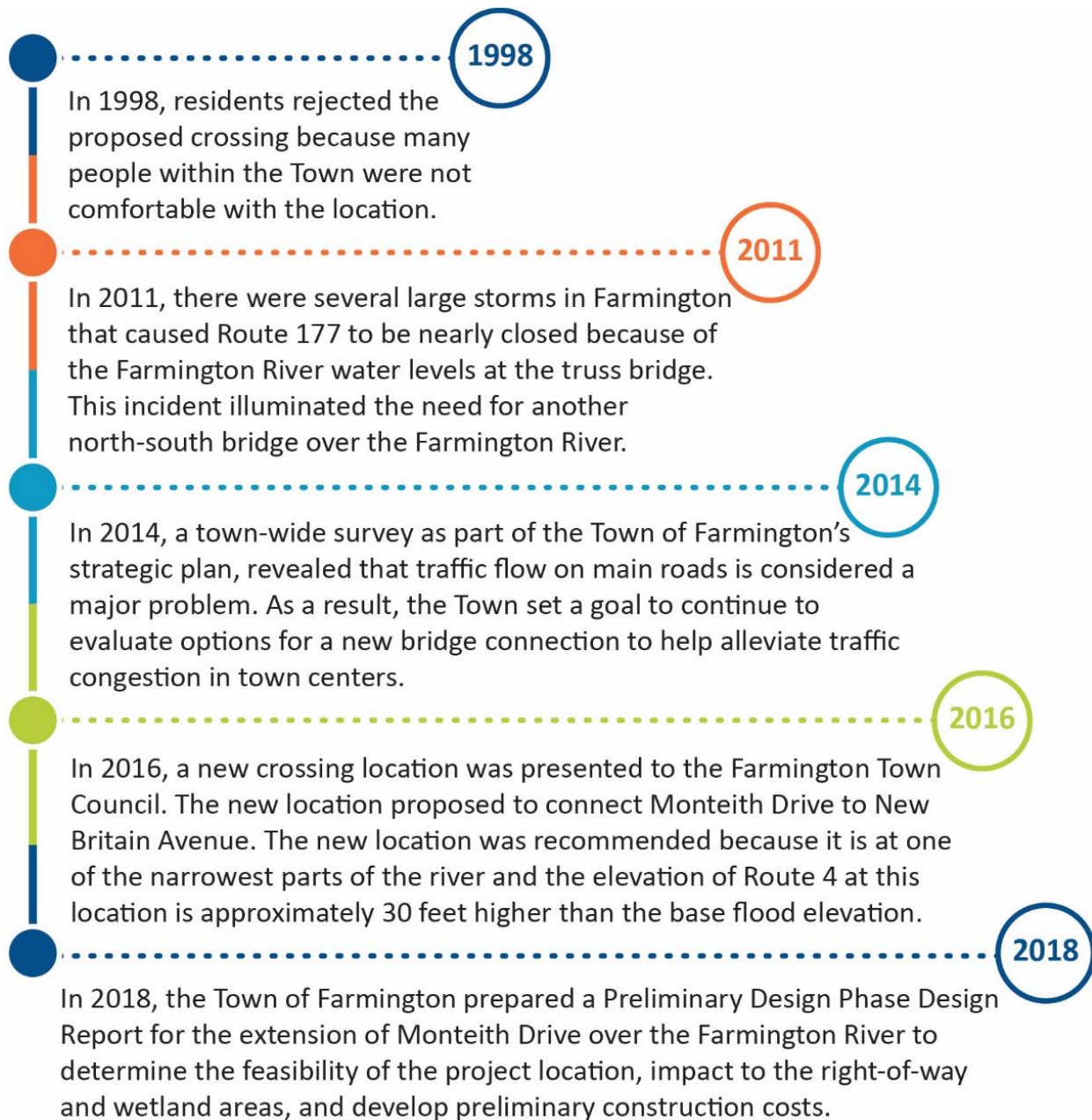




## 1.1 Background

A new connection across the Farmington River is not a novel idea to the Town of Farmington. The idea dates back to the 1990s when the Route 4 Corridor Study proposed a new bridge to connect New Britain Avenue and Bridgewater Road to Brickyard Road, substantially east of the new proposed bridge crossing at Monteith Drive. A timeline of the work completed to date is presented in the graphic below.





The 2018 preliminary design plans showed the extension of Monteith Drive to have one through lane in each direction with left-turn lanes at each approaching intersection and sidewalks and bike lanes on each side of the bridge. The plans also showed the widening of Route 4 to provide dedicated left-turn lanes in both directions at the intersection of Route 4 and Monteith Drive and the widening of New Britain Avenue to provide an eastbound left-turn lane at the new bridge connection. New traffic control signals were assumed at both approaching intersections. A connection to the Farmington Canal River Trail and a new multimodal trail to the Farmington River were also proposed.



Source: Preliminary Design Phase Design Report Extension of Monteith Drive over Farmington River, AECOM, April 6, 2018

As part of the 2018 Preliminary Design Report, CRCOG also performed 2015 and 2040 regional travel demand model forecasts to compare the future traffic volumes with and without the new bridge crossing at Monteith Drive. The regional travel demand model results showed that with the construction of the new bridge, the future traffic growth on the immediate surrounding roadway network would increase while future traffic growth in both Unionville Village and Farmington Center would decline.

It is also important to note that the Town of Farmington is currently constructing a new high school at the end of Monteith Drive, which is anticipated to be completed and occupied by fall 2025. The existing high school will remain in place and operational until the new building is constructed. At that time, a portion of the existing high school (the wing that was built in 2003)



will be renovated to be the Farmington Board of Education Central Business Office, and another portion of the existing high school (the 1928 Building) will remain (the use of this building has not been determined yet); the rest will be demolished. Additionally, with the new high school, Monteith Drive will be widened slightly to provide two lanes in both directions from Farmington Avenue (Route 4) to the new high school, as shown in the preliminary design plans in the Preliminary Design Phase Design Report.

A traffic study for the new high school was completed in April 2022 to assess the transportation implications on Monteith Drive and surrounding roadway network. The intersection of Farmington Avenue (Route 4) and Monteith Avenue is not expected to experience any changes in overall LOS with the new high school during the morning drop-off and afternoon pickup peak hours. However, the intersection is expected to operate at unacceptable conditions under Background and Combined (2025) Conditions. The site-generated traffic projections and need for improvements at the intersection of Route 4 at Monteith Drive were factored into this Farmington Area Connectivity Study.

## 1.2 Project Purpose

The primary purpose of the Farmington Area Connectivity Study is to enhance multimodal connectivity, reduce traffic congestion, and build resiliency in both the local and regional transportation system with the addition of a new bridge over the Farmington River.

## 1.3 Needs and Deficiencies

### 1.3.1 Multimodal Connectivity

The Farmington Area Connectivity Study looks at enhancing the transportation network by addressing the problem of limited north-south transportation connections across the Farmington River. The existing roadway network severely limits all transportation modal connections from the Town Hall, Town Library, and high school on the north side of the river to the Police Station, Community Center, Senior Citizen Center, and Public Works facility on the south side. Additionally, there are no crossings for pedestrians and bicycles within the 2.5 miles between the Route 177 bridge and the Farmington River Trail crossing over the Farmington River located 1.7 miles east of Route 177.

Introducing a new multimodal bridge between Route 177 and Route 10 will improve this network deficiency and enhance connectivity within the Town of Farmington.

### 1.3.2 Congestion

Currently, the existing Route 177 Unionville bridge over the Farmington River and Route 10 are the main north-south routes within the Town of Farmington and, experience fairly long delays and heavy queueing during both the morning and afternoon peak hours. An additional north-south route over the Farmington River will increase travel route options and shorten travel times in Farmington and the surrounding towns in the region. The proposed Monteith Drive bridge will also help to better distribute traffic along Route 4 and reduce congestion on Route 177, River Road, and Route 10. Overall traffic operational improvements are expected both on the local and regional transportation network.

### 1.3.3 Emergency Response

The limited number of north-south routes over the Farmington River also has a direct impact on emergency response time. An additional bridge will increase travel route options across the river



and shorten travel times for emergency response across town. For instance, the new bridge would provide a direct connection across the river from the Police Station on New Britain Avenue to the Farmington High School on Monteith Drive

### 1.3.4 Resiliency of Transportation System

The existing Route 177 bridge has shown to be vulnerable and could potentially be out of commission during a major flooding event or a major reconstruction project. Such an event will have significant traffic impacts on both local and regional traffic patterns. North-south traffic will have to utilize River Road or Route 10, increasing the delays and queueing on these already unstable roadways. A new bridge over the Farmington River will provide an alternate travel route and thereby build resiliency in the transportation system. According to the 2018 Preliminary Engineering completed by the Town of Farmington, the proposed bridge is expected to be well above the 500-year flood elevation and will cross the Farmington River at its narrowest section.

## 1.4 Study Area

The intent of this study is to identify the impacts associated with the proposed Monteith Drive bridge not only in the immediate vicinity of the bridge but also on a regional scale. As such, the study area extends throughout the town of Farmington and into the adjacent towns of Avon, Burlington, Bristol, and Plainville.

Due to the extent of the study area, a data-driven approach was used to determine the study intersections. To understand what roadways would most likely be affected by the proposed Monteith Drive bridge, CRCOG performed initial Travel Demand Model runs both with and without the proposed bridge to estimate the two-way traffic flow changes as a result of the proposed Monteith Drive bridge. CRCOG then mapped for a 3-hour window, the morning peak period (6:00 a.m. to 9:00 a.m.) and afternoon peak period (3:00 p.m. to 6:00 p.m.) estimated traffic volume changes. **Figure 1** displays the estimated future traffic volume changes as a result of the proposed Monteith Drive bridge during the peak 3 hours in the morning and afternoon on a typical weekday. Any intersection that experienced peak period traffic volume changes of 100 vehicles or greater was selected as a study intersection. The study intersections are displayed in **Figure 2** and are also listed below.

1. Canton Road (Route 4)/Canton Road (Route 179) at Spielman Highway (Route 4) in Burlington
2. Collinsville Road (Route 4) at River Road
3. Main Street/Farmington Avenue (Route 4) at Lovely Street/South Main Street (Route 177) at School Street
4. Farmington Avenue (Route 4) at West Avon Road (Route 167)
5. Farmington Avenue (Route 4) at Monteith Drive
6. Farmington Avenue (Route 4) at Brickyard Road/Bridgewater Road
7. Farmington Avenue (Route 4) at Garden Street
8. Farmington Avenue (Route 4) at Waterville Road/Main Street (Route 10)
9. Farmington Avenue (Route 4) at High Street/Backage Road
10. West Avon Road (Route 167) at Scoville Road in Avon



Figure 1 - Estimated Future Traffic Volume Changes

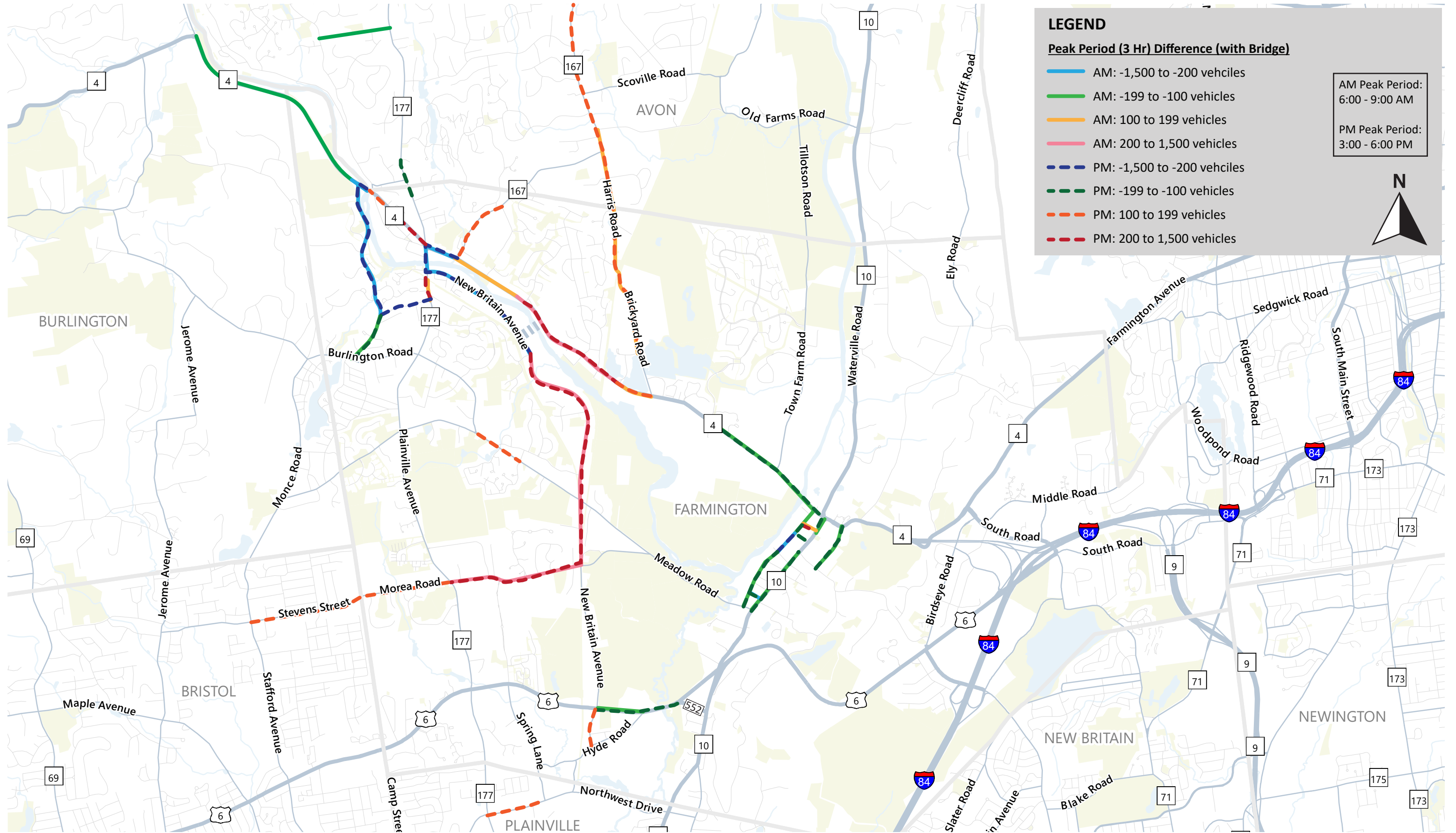
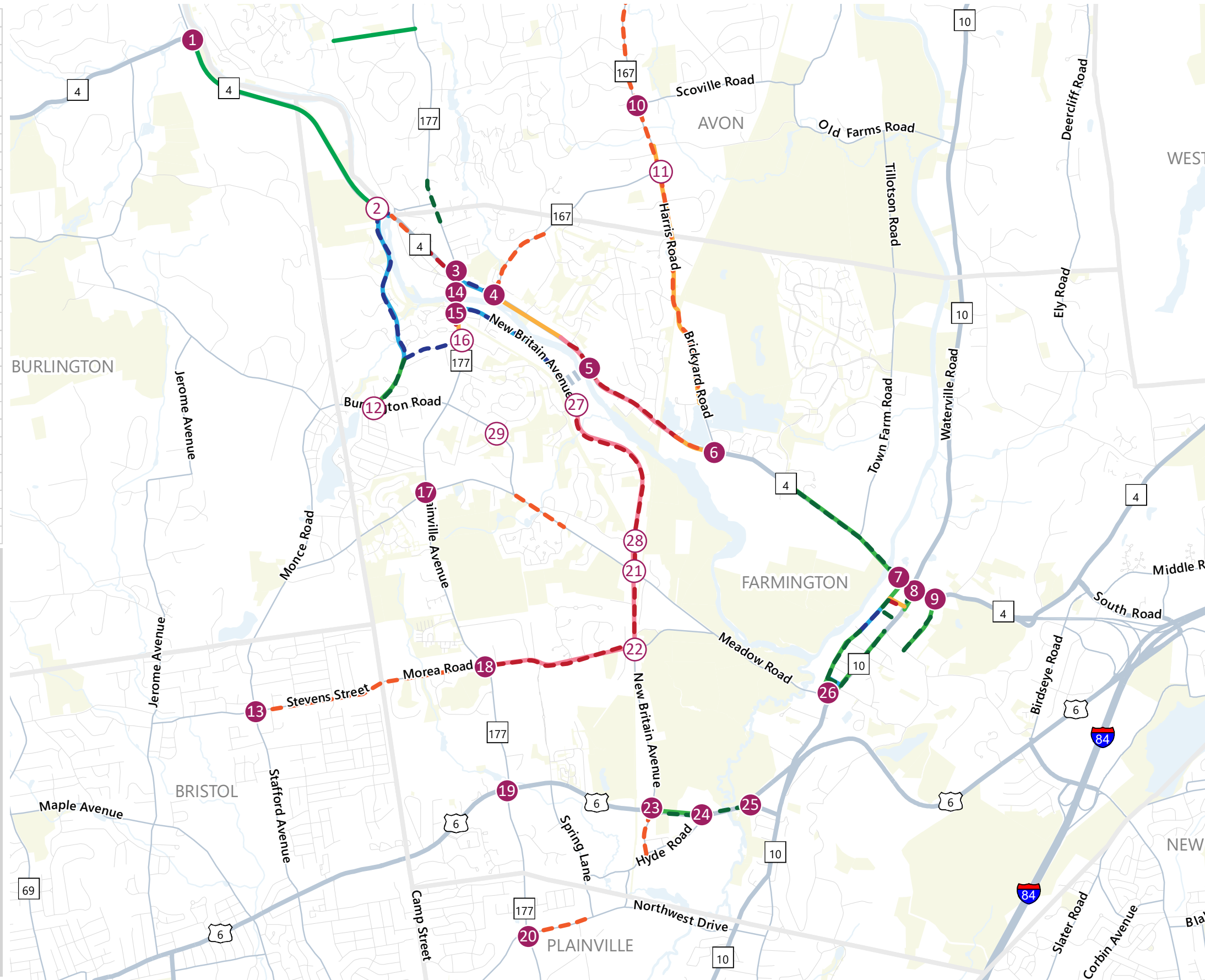


Figure 2 - Study Intersections

ID	LOCATION
1	Canton Road (Route 4)/Canton Road (Route 179) @ Speilman Highway (Route 4)
2	Collinsville Road (Route 4) @ River Road
3	Main Street (Route 4) @ Lovely Street (Route 177) @ School Street
4	Farmington Avenue (Route 4) @ West Avon Road (Route 167)
5	Farmington Avenue (Route 4) @ Monteith Drive
6	Farmington Avenue (Route 4) @ Brickyard Road/Bridgewater Road
7	Farmington Avenue (Route 4) @ Garden Street
8	Farmington Avenue (Route 4) @ Waterville Road/Main Street (Route 10)
9	Farmington Avenue (Route 4) @ High Street/Backage Road
10	West Avon Road (Route 167) @ Scoville Road
11	West Avon Road (Route 167) @ Harris Road
12	River Road at Burlington Road
13	Stafford Avenue @ Stevens Street
14	South Main Street (Route 177) @ Mill Street
15	South Main Street (Route 177) @ Railroad Avenue/New Britain Avenue
16	Plainville Avenue (Route 177) @ Webster Street
17	Plainville Avenue (Route 177) @ Coppermine Road
18	Plainville Avenue (Route 177) @ Morea Road/Meadow Road
19	Plainville Avenue (Route 177) @ Scott Swamp Road (Route 6)
20	Plainville Avenue (Route 177) at Northwest Drive
21	Red Oak Hill Road @ New Britain Avenue
22	Meadow Road @ New Britain Avenue
23	Scott Swamp Road (Route 6) @ New Britain Avenue
24	Scott Swamp Road (Route 6) @ Hyde Road
25	Colt Highway (Route 6) @ Scott Swamp Road (Route 552)
26	Main Street (Route 10) @ Meadow Road
27	New Britain Avenue @ Oakridge
28	New Britain Avenue @ Coppermine Road
29	West District Road @ Whispering Rod Road/Chaffee Lane



**LEGEND**

**Proposed Study Intersections**

- Signalized Intersection
- Unsignalized Intersection

**Peak Period (3 Hr) Difference (with Bridge)**

- AM: -1,500 to -200 vehicles
- AM: -199 to -100 vehicles
- AM: 100 to 199 vehicles
- AM: 200 to 1,500 vehicles
- PM: -1,500 to -200 vehicles
- PM: -199 to -100 vehicles
- PM: 100 to 199 vehicles
- PM: 200 to 1,500 vehicles

AM Peak Period:  
6:00 - 9:00 AM  
  
PM Peak Period:  
3:00 - 6:00 PM



11. West Avon Road (Route 167) at Harris Road
12. River Road at Burlington Road
13. Stafford Avenue at Stevens Street in Bristol
14. South Main Street (Route 177) at Mill Street
15. South Main Street (Route 177) at Railroad Avenue/New Britain Avenue
16. Plainville Avenue (Route 177) at Webster Street
17. Plainville Avenue (Route 177) at Coppermine Road
18. Plainville Avenue (Route 177) at Morea Road/Meadow Road
19. Plainville Avenue (Route 177) at Scott Swamp Road (US Route 6)
20. Plainville Avenue (Route 177) at Northwest Drive
21. Red Oak Hill Road at New Britain Avenue
22. Meadow Road at New Britain Avenue
23. Scott Swamp Road (US Route 6) at New Britain Avenue
24. Scott Swamp Road (US Route 6) at Hyde Road
25. Colt Highway (US Route 6) at Scott Swamp Road (Route 552)
26. Main Street (Route 10) at Meadow Road
27. New Britain Avenue at Oakridge
28. New Britain Avenue at Coppermine Road
29. West District Road at Whispering Road and Chafee Lane
30. New Britain Avenue at Monteith Drive (*future intersection with the proposed bridge*)



## 2.0 Existing Conditions

The following section summarizes the existing conditions of the study area. Existing information, including the roadway network, multimodal amenities, vehicle volumes, pedestrian volumes, and crash history, was collected, and an assessment was conducted to establish the current conditions of the study area roadway network and transportation system.

### 2.1 Roadway Network

The main roadways within the vicinity of the proposed Monteith Drive bridge are Route 4, New Britain Avenue, Route 177, Route 10, and US Route 6.

**Route 4** is classified as an urban principal arterial by the Connecticut Department of Transportation (CTDOT) and runs east/west from Route 41 in Sharon near the Connecticut/New York border to West Hartford. Within the study area, Route 4 (known as Spielman Highway, Canton Road, Collinsville Road, Main Street, and Farmington Avenue) provides regional access north of the Farmington River from Burlington to West Hartford. Between Route 179 and Town Farm Road, the arterial has one lane in each direction. Between Town Farm Road and Interstate 84, the arterial widens to have two lanes eastbound and one lane westbound. At signalized intersections, the arterial also widens to provide additional turn lanes. Based on traffic monitoring data obtained from CTDOT, the annualized average daily traffic (AADT) on Route 4 within the study area ranges from 12,300 to 29,000 daily vehicles, with the lowest vehicle totals observed on the western end of the study area and highest observed on the eastern end of the study area. Segments of Route 4 in Farmington Center and Unionville see significant congestion. In fact, westbound lanes coming downhill from I-84 and ending at the intersection with Route 10 have been shown in the CRCOG 2020 Congestion Management Process (CMP) and subsequent analyses to be one of the most congested and delayed non-interstate highways in the whole CRCOG region. Route 4 between the intersection with Route 167 through Unionville to Huckleberry Hill Road is also very congested.



Route 4 at Brickyard Road and Bridgewater Road

**New Britain Avenue** is an urban collector that generally runs east/west from Route 177 to Route 6. Within the study area, New Britain Avenue provides local access south of the Farmington River. The collector has one lane in each direction and widens to provide additional turn lanes at signalized intersections. Based on traffic monitoring data obtained from CTDOT in September 2021, the AADT on New Britain Avenue is 3,900 daily vehicles.

**Route 10** is classified as an urban principal arterial by CTDOT that runs north/south from Granby near the Connecticut/Massachusetts border to New Haven. Within the study area, Route 10 (known as Waterville Road and Main Street) provides regional access across the center of Farmington. The arterial has one lane in each direction and widens to provide additional turn lanes at signalized intersections. Based on traffic monitoring data obtained from CTDOT, the AADT on Route 177 within the study area ranges from 6,600 to 13,000 daily



vehicles, with the lowest vehicle total observed on the northern end of the study area and highest observed on the southern end of the study area.



**Route 177 at New Britain Avenue and Railroad Avenue**

**Route 177** is classified as an urban minor arterial by CTDOT and runs north/south from Plainville to Canton. Within the study area, Route 177 (known as Lovely Street, South Main Street, and Plainville Avenue) provides regional access across the Farmington River. The arterial has one lane in each direction and widens to provide additional turn lanes at signalized intersections. Based on traffic monitoring data obtained from CTDOT, the AADT on Route 177 within the study area ranges from 8,000 to 20,400 daily vehicles, with the lowest vehicle totals observed on the northern end of the study area and highest observed on the southern end of the study area.

**US Route 6** is classified as an urban principal arterial by CTDOT that runs east/west from Massachusetts to California. Within the study area, US Route 6 (known as Scott Swamp Road and Colt Highway) provides regional access to I-84 across the southern end of Farmington. West of Route 177, the arterial has one lane in each direction, and between Route 177 and Route 552, the arterial widens to have two lanes in each direction. At signalized intersections, the arterial also widens to provide additional turn lanes. Based on traffic monitoring data obtained from CTDOT, the AADT on US Route 6 within the study area ranges from 15,600 to 22,900 daily vehicles, with the lowest vehicle totals observed on the western end of the study area and highest observed on the eastern end of the study area.

## 2.2 Traffic Volumes

Daily and peak-hour traffic volumes were collected throughout the study area to review the existing traffic conditions and to validate and calibrate the CRCOG Regional Travel Demand Model.

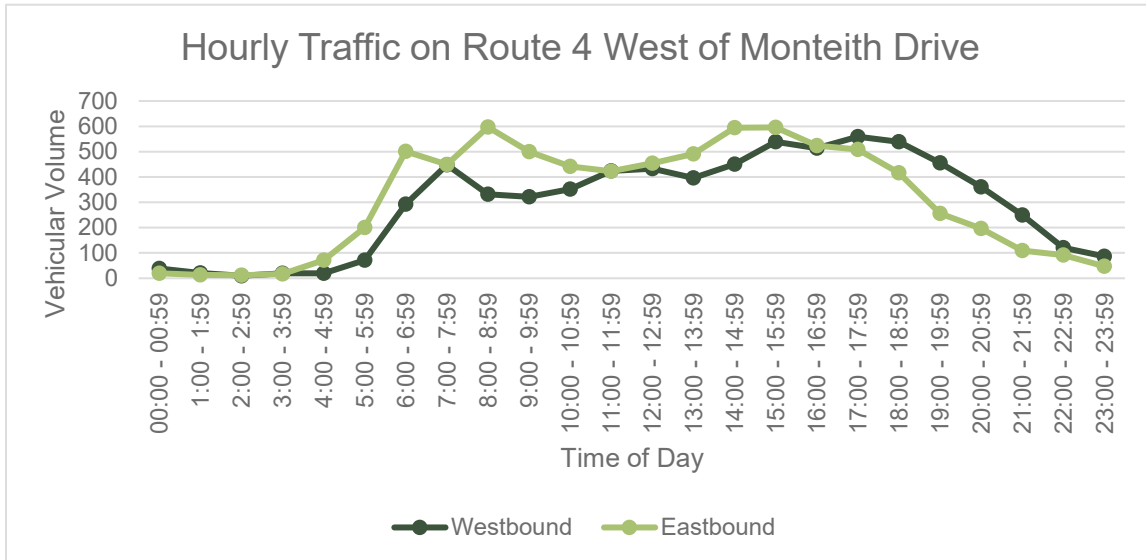
### 2.1.1 Average Daily Traffic Counts

Average daily traffic counts (ADT) were conducted at two locations on Farmington Avenue (Route 4), at one location on New Britain Avenue and the other location on Route 177, on Wednesday, November 3, 2022, to capture the hourly fluctuations in roadway volumes, vehicle classifications, and vehicular speeds.

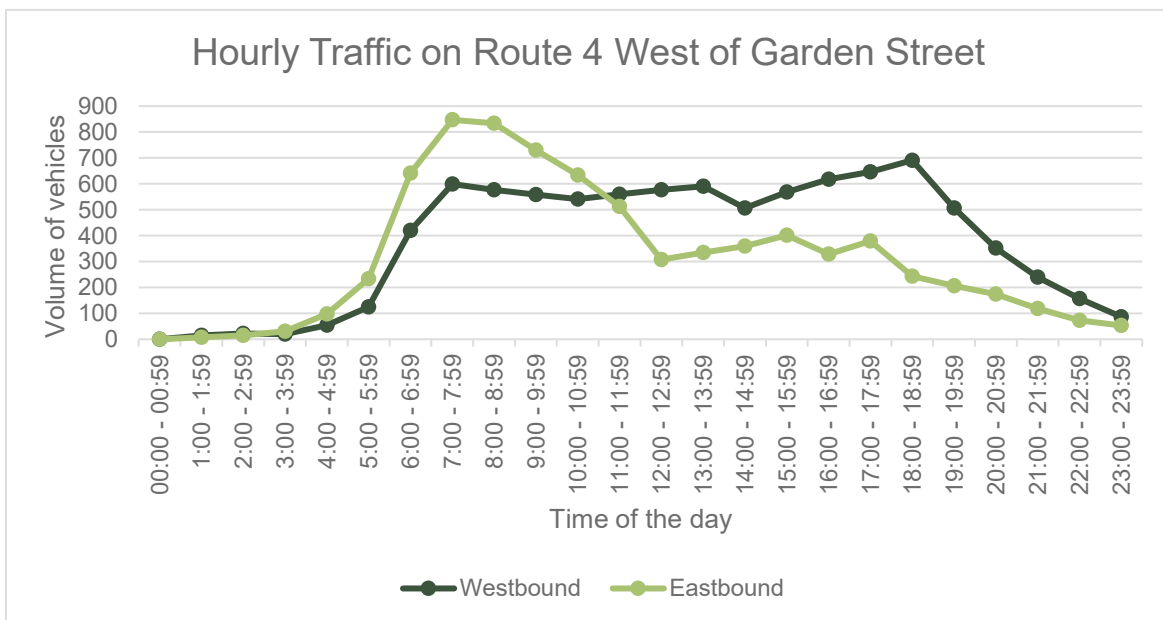
The ADT observed on Farmington Avenue (Route 4) west of Monteith Drive was 14,583 vehicles (7,054 vehicles in the westbound direction and 7,529 vehicles in the eastbound direction). Of the 14,583 vehicles, approximately 72 percent were passenger cars, 14 percent were pickup trucks and vans, 12 percent were single unit and larger trucks, 1 percent were buses, and another 1 percent were motorcycles. The average speed in the westbound direction was observed to be approximately 41.5 miles per hour (mph), and the 85<sup>th</sup> percentile speed was observed to be approximately 47.6 mph. The average speed in the eastbound direction was observed to be approximately 41.9 mph, and the 85<sup>th</sup> percentile speed was observed to be



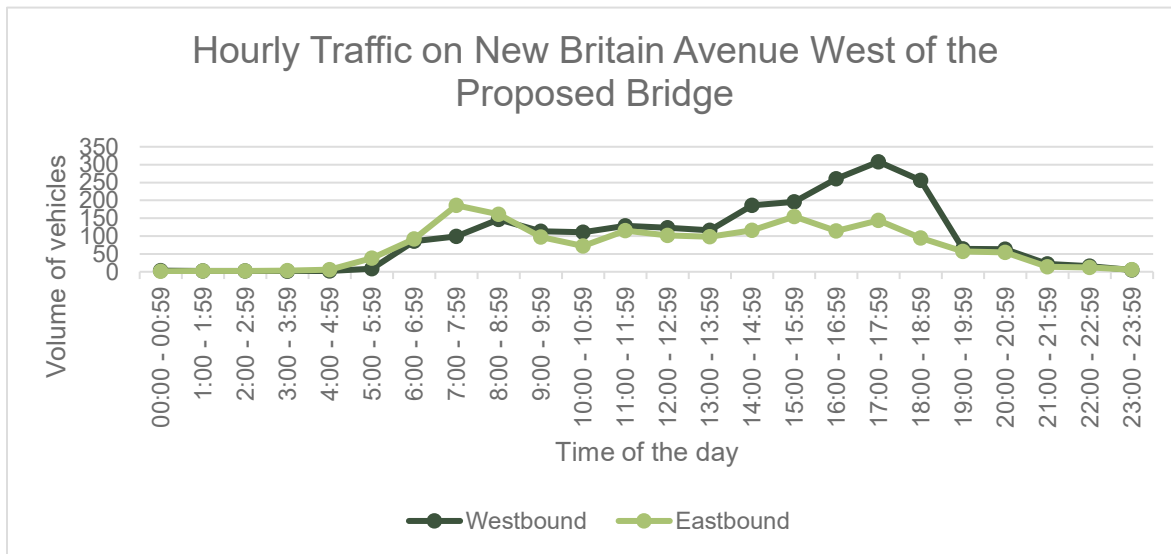
approximately 47.9 mph. The chart below displays the hourly vehicles on Farmington Avenue (Route 4) between Knollwood Road and Monteith Drive.



The ADT observed on Farmington Avenue (Route 4) west of Garden Street was 16,589 vehicles (9,030 vehicles in the westbound direction and 7,559 vehicles in the eastbound direction). Of the 16,589 vehicles, approximately 74 percent were passenger cars, 11 percent were pickup trucks and vans, 12 percent were single unit and larger trucks, 1 percent were buses, and another 2 percent were motorcycles. The average speed in the westbound direction was observed to be approximately 40.9 mph, and the 85<sup>th</sup> percentile speed was observed to be approximately 47.9 mph. The average speed in the eastbound direction was observed to be approximately 4.34 mph, and the 85<sup>th</sup> percentile speed was observed to be approximately 49 mph. The chart below displays the hourly vehicles on Farmington Avenue (Route 4) between Town Farm Road and Garden Street.



The ADT observed on New Britain Avenue west of the proposed bridge location was 4,061 vehicles (2,319 vehicles in the westbound direction and 1,742 vehicles in the eastbound direction). Of the 4,061 vehicles, approximately 78 percent were passenger cars, 11 percent were pickup trucks and vans, 9 percent were single unit and larger trucks, 1 percent were buses, and another 1 percent were motorcycles. The average speed in the westbound direction was observed to be approximately 39.6 mph, and the 85<sup>th</sup> percentile speed was observed to be approximately 44.4 mph. The average speed in the eastbound direction was observed to be approximately 40.7 mph, and the 85<sup>th</sup> percentile speed was observed to be approximately 46.4 mph. The chart below displays the hourly vehicles on New Britain Avenue between Habern Avenue and Oakridge.



The ADT observed on Route 177 south of Farmington Avenue (Route 4) was 15,078 vehicles (7,948 vehicles in the northbound direction and 7,130 vehicles in the southbound direction). Of the 15,078 vehicles, approximately 73 percent were passenger cars, 12 percent were pickup trucks and vans, 12 percent were single unit and larger trucks, 1 percent were buses, and another 2 percent were motorcycles. The average speed in the northbound direction was observed to be approximately 23.3 mph, and the 85<sup>th</sup> percentile speed was observed to be approximately 29.5 mph. The average speed in the southbound direction was observed to be approximately 23.8 mph, and the 85<sup>th</sup> percentile speed was observed to be approximately 31.5 mph. The chart below displays the hourly vehicles on South Main Street (Route 177) between Mill Street and New Britain Avenue.

### 2.2.2 Peak-Hour Traffic Counts

Peak-hour traffic counts were conducted at the existing study intersections on September 21, 2021; October 19, 2021; October 21, 2021; October 27, 2021; October 28, 2021, November 3, 2021; and January 4, 2023, from 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m. to capture peak commuter activity. For analysis, the highest single peak-hour volume at each intersection for each period was extracted from the count data. The existing peak-hour traffic volumes are shown in **Figure 3a** and **Figure 3b**. The raw counts are included in Appendix A.

## 2.3 Multimodal Amenities

To illustrate the walkability and bikeability of the proposed bridge location, the Walk Score and Bike Score for the proposed bridge locations were obtained from *walkscore.com*. A Walk Score



Figure 3a - Existing (2021) Conditions Peak-Hour Traffic Volumes (Intersections 1-16)

<p><b>1</b></p> <p>138 [305] 269 [265]</p> <p>Canton Rd (Rt 179)</p> <p>Spielman Hwy (Rt 4)</p> <p>223 [210] 395 [324]</p> <p>171 [448] 166 [378]</p>	<p><b>2</b></p> <p>286 [493] 68 [96]</p> <p>Collinsville Rd (Rt 4)</p> <p>River Rd</p> <p>485 [393] 77 [91]</p> <p>51 [113] 91 [80]</p>	<p><b>3</b></p> <p>5 [8] 396 [315] 167 [147] 2 [2]</p> <p>226 [318] 87 [76]</p> <p>S Main St (Rt 177)</p> <p>40 [80] 217 [391] 32 [23] 163 [288]</p> <p>Farmington Ave (Rt 4)</p> <p>9 [0] 122 [176] 242 [300] 263 [266]</p>	<p><b>4</b></p> <p>138 [238] 49 [59]</p> <p>W Avon Rd (Rt 167)</p> <p>35 [65] 374 [572]</p> <p>Farmington Ave (Rt 4)</p> <p>197 [185] 627 [540]</p>
<p><b>5</b></p> <p>144 [96] 175 [85]</p> <p>Monteith Dr</p> <p>446 [62] 293 [567]</p> <p>Farmington Ave (Rt 4)</p> <p>303 [81] 435 [569]</p>	<p><b>6</b></p> <p>36 [59] 9 [12] 351 [301]</p> <p>Brickyard Rd</p> <p>174 [241] 499 [538] 29 [26]</p> <p>Farmington Ave (Rt 4)</p> <p>29 [52] 558 [596] 6 [17]</p> <p>Brigewater Rd</p> <p>6 [26] 1 [16] 18 [33]</p>	<p><b>7</b></p> <p>1041 [1094] 91 [106]</p> <p>Garden St</p> <p>622 [763] 13 [12] 35 [14]</p> <p>Farmington Ave (Rt 4)</p>	<p><b>8</b></p> <p>16 [8] 102 [158] 212 [197]</p> <p>Waterville Rd (Rt 10)</p> <p>206 [78] 496 [622] 48 [75]</p> <p>Farmington Ave (Rt 4)</p> <p>9 [1] 1019 [902] 107 [211]</p> <p>97 [163] 141 [116] 134 [70]</p>
<p><b>9</b></p> <p>2 [2] 0 [2] 3 [5]</p> <p>Backage Rd</p> <p>6 [4] 777 [746] 25 [50]</p> <p>Farmington Ave (Rt 4)</p> <p>6 [4] 1311 [1174] 27 [37]</p> <p>High St</p> <p>28 [62] 1 [1] 180 [78]</p>	<p><b>10</b></p> <p>2 [29] 399 [498] 108 [42]</p> <p>Sycamore Hills Rd</p> <p>43 [71] 2 [1] 52 [44]</p> <p>Scoville Rd</p> <p>4 [8] 1 [6] 0 [6]</p> <p>W Avon Rd (Rt 167)</p> <p>2 [2] 412 [399] 111 [39]</p>	<p><b>11</b></p> <p>101 [287] 270 [330]</p> <p>W Avon Rd (Rt 167)</p> <p>282 [180] 66 [38]</p> <p>Harris Rd</p> <p>32 [46] 207 [237]</p>	<p><b>12</b></p> <p>69 [149] 25 [33]</p> <p>River Rd</p> <p>12 [58] 36 [161]</p> <p>Burlington Rd</p> <p>77 [133] 184 [97]</p>
<p><b>13</b></p> <p>33 [40] 188 [213] 46 [22]</p> <p>Stafford Ave</p> <p>17 [36] 93 [274] 65 [74]</p> <p>Stevens St</p> <p>29 [37] 260 [145] 92 [58]</p> <p>50 [119] 128 [271] 55 [64]</p>	<p><b>14</b></p> <p>12 [21] 634 [708] 3 [22]</p> <p>S Main St (Rt 177)</p> <p>7 [31] 6 [19] 37 [107]</p> <p>Mill St</p> <p>26 [45] 6 [18] 51 [89]</p> <p>56 [98] 641 [654] 53 [125]</p>	<p><b>15</b></p> <p>3 [8] 527 [716] 181 [167]</p> <p>S Main St (Rt 177)</p> <p>141 [227] 2 [9] 15 [32]</p> <p>New Britain Ave</p> <p>5 [12] 6 [6] 23 [22]</p> <p>8 [8] 600 [634] 18 [27]</p>	<p><b>16</b></p> <p>36 [58] 503 [688]</p> <p>Plainville Ave (Rt 177)</p> <p>43 [32] 73 [36]</p> <p>Webster St</p> <p>19 [56] 606 [653]</p>

**LEGEND**

- # Signalized Study Intersection
- # Unsignalized Study Intersection
- ← X [Y] Weekday AM [PM] Peak Hour Vehicle Volume

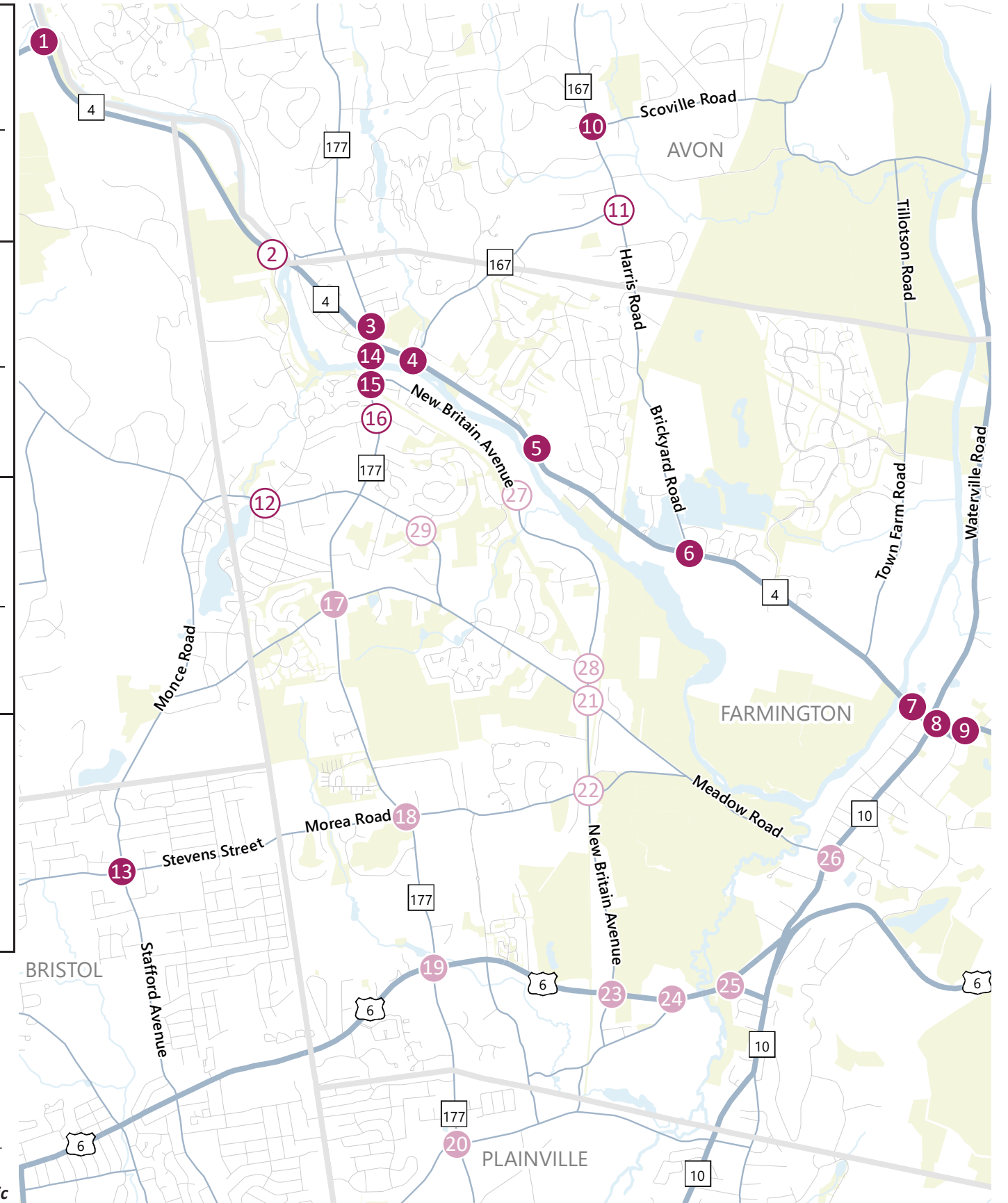
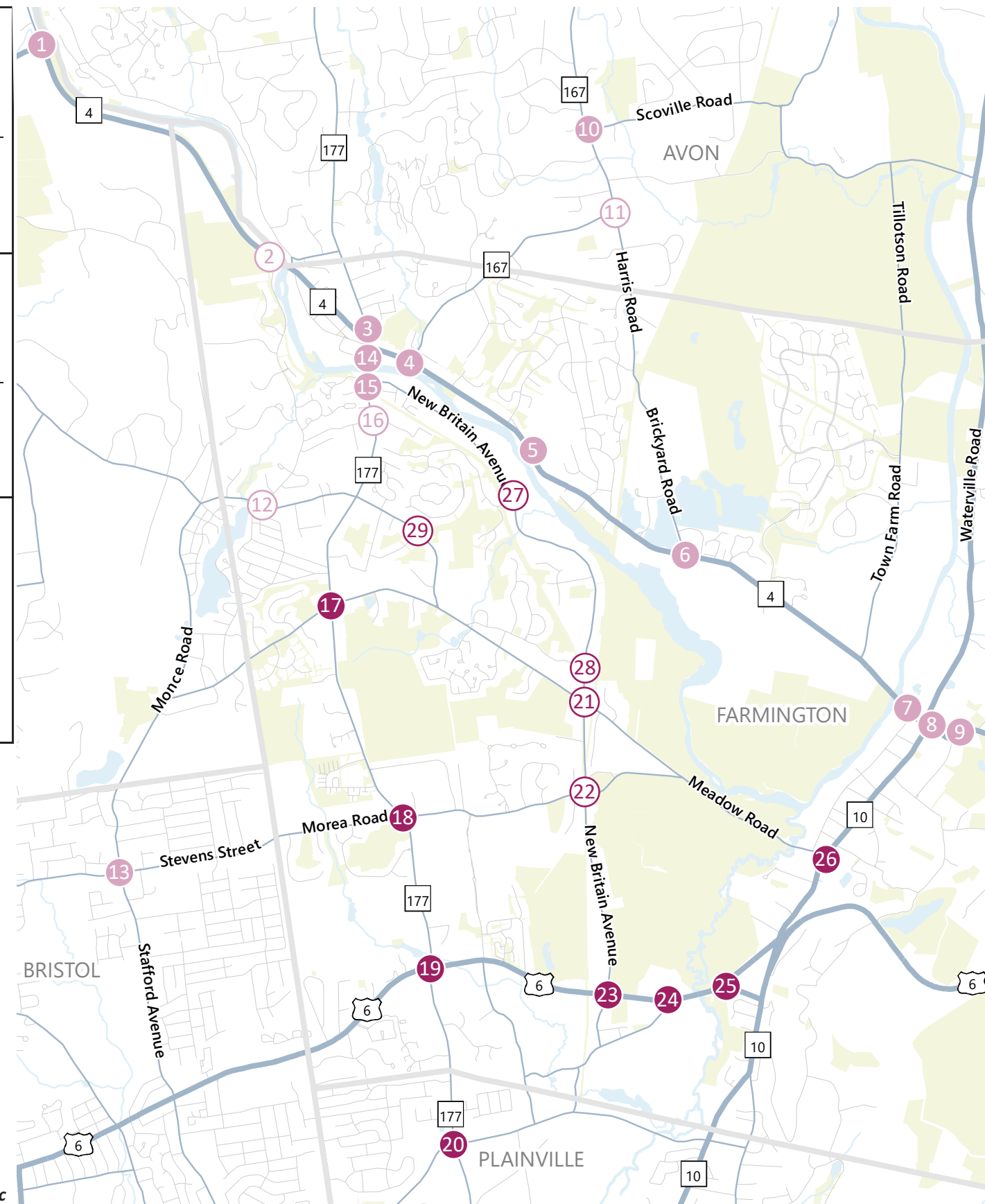


Figure 3b - Existing (2021) Conditions Peak-Hour Traffic Volumes (Intersections 17-29)

<p><b>17</b></p> <p>93 [179] 587 [482] 40 [26]</p> <p>Plainville Ave (Rt. 177)</p> <p>Coppermine Rd</p> <p>14 [45] 22 [78] 36 [32]</p> <p>154 [147] 69 [41] 52 [23]</p> <p>29 [61] [688] 454 [36] 39 [36]</p>	<p><b>18</b></p> <p>18 [40] 670 [487] 71 [50]</p> <p>Morea Rd</p> <p>Plainville Ave (Rt. 177)</p> <p>Meadow Rd</p> <p>23 [73] 35 [183] 13 [35]</p> <p>39 [22] 177 [82] 236 [133]</p> <p>90 [277] 445 [759] 29 [24]</p>	<p><b>19</b></p> <p>85 [135] 682 [457] 232 [139]</p> <p>Plainville Ave (Rt. 177)</p> <p>Scott Swamp Rd (Rt 6)</p> <p>66 [220] 299 [658] 73 [122]</p> <p>100 [151] 642 [404] 134 [129]</p> <p>81 [129] 368 [670] 86 [72]</p>	<p><b>20</b></p> <p>42 [14] 698 [558] 98 [85]</p> <p>Unionville Ave (Rt. 177)</p> <p>Northwest Dr</p> <p>48 [142] 113 [192] 39 [201]</p> <p>27 [26] 151 [81] 70 [76]</p> <p>159 [94] 505 [842] 153 [59]</p>
<p><b>21</b></p> <p>8 [5] 121 [98] 132 [159]</p> <p>New Britain Ave</p> <p>Red Oak Hill Rd</p> <p>59 [133] 46 [181] 7 [24]</p> <p>11 [9] 213 [139] 69 [42]</p> <p>16 [121] 65 [182] 6 [21]</p>	<p><b>22</b></p> <p>39 [42] 163 [124] 0 [2]</p> <p>New Britain Ave</p> <p>Meadow Rd</p> <p>0 [11] 53 [123] 17 [9]</p> <p>49 [65] 153 [94] 80 [49]</p> <p>29 [120] 108 [303] 8 [14]</p>	<p><b>23</b></p> <p>28 [28] 68 [85] 146 [147]</p> <p>New Britain Ave</p> <p>Scott Swamp Rd (Rt 6)</p> <p>118 [316] 505 [932] 13 [17]</p> <p>24 [29] 807 [645] 26 [23]</p> <p>18 [22] 36 [97] 12 [15]</p>	<p><b>24</b></p> <p>1 [9] 1 [5] 1 [10]</p> <p>Hyde Rd</p> <p>Scott Swamp Rd (Rt 6)</p> <p>12 [2] 628 [1218] 131 [115]</p> <p>10 [2] 982 [795] 11 [22]</p> <p>4 [13] 5 [0] 38 [175]</p>
<p><b>25</b></p> <p>603 [1021] 86 [158]</p> <p>Scott Swamp Rd (Rt 6)</p> <p>Colt Hwy (Rt 6)</p> <p>921 [707] 168 [277]</p> <p>156 [274] 14 [35]</p>	<p><b>26</b></p> <p>105 [226] 237 [479]</p> <p>Main St (Rt 10)</p> <p>Meadow Rd</p> <p>340 [163] 91 [136]</p> <p>77 [179] 343 [318]</p>	<p><b>27</b></p> <p>7 [26] 157 [119]</p> <p>New Britain Ave</p> <p>Oakridge</p> <p>16 [13] 28 [18]</p> <p>11 [25] 110 [294]</p>	<p><b>28</b></p> <p>9 [24] 207 [188]</p> <p>New Britain Ave</p> <p>Coppermine Rd</p> <p>14 [13] 34 [15]</p> <p>12 [36] 168 [319]</p>
<p><b>29</b></p> <p>19 [25] 1 [2] 22 [22]</p> <p>Chaffee Ln</p> <p>W District Rd</p> <p>23 [18] 72 [149] 12 [9]</p> <p>27 [22] 90 [60] 0 [3]</p> <p>2 [3] 0 [0] 17 [4]</p>			

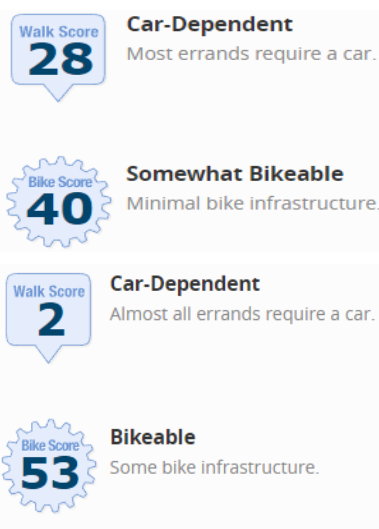
**LEGEND**

- Signalized Study Intersection
- Unsignalized Study Intersection
- x [Y] Weekday AM [PM] Peak Hour Vehicle Volume



measures the walkability of any location based on the distance to nearby places and the available pedestrian facilities, and a Bike Score measures whether an area is good for biking based on the availability of bike lanes and trails, hills, road connectivity, and destinations.

The intersection of Farmington Avenue (Route 4) and Monteith Drive received a Walk Score of 28 out of 100 and a Bike Score of 40 out of 100, illustrating that the northern section of the study area is very car-dependent and has minimal bike infrastructure. Based on the scores, most errands within the study area require the use of a car or transit.



Source: 2022 Walk

The proposed bridge location at New Britain Avenue received a Walk Score of 2 out of 100 and a Bike Score of 53 out of 100, illustrating that the southern section of the study area is even more car-dependent but has some more bike infrastructure with the Farmington Canal Heritage Trail and the Farmington River Trail. Based on the scores, almost all errands within the study area require the use of a car or transit.

### 2.3.1 Regional Facilities

**Figure 4** displays the regional transit and bicycle amenities within the study area.

Bus transit service is provided within the study area by CTtransit. CTtransit is CTDOT’s bus service. CTtransit bus routes 66 and 909 both have bus stops within the study area along Farmington Avenue (Route 4) and Route 177.

**CTtransit Route 66** is a local bus route that operates along Farmington Avenue (Route 4) between downtown Hartford and Tunxis Community College. The route operates from approximately 5:00 a.m. to 1:00 a.m. on weekdays, from 6:00 a.m. to 11:30 p.m. on Saturdays, and from 6:00 a.m. to 8:00 p.m. on Sundays. Headways are roughly 30 minutes.

**CTtransit Route 909** is an express route that operates between Unionville and Hartford. The express route operates during peak commute times from approximately 6:45 a.m. to 8:00 a.m. and 4:00 p.m. to 5:45 p.m. on weekdays. There is no service on Saturdays and Sundays.

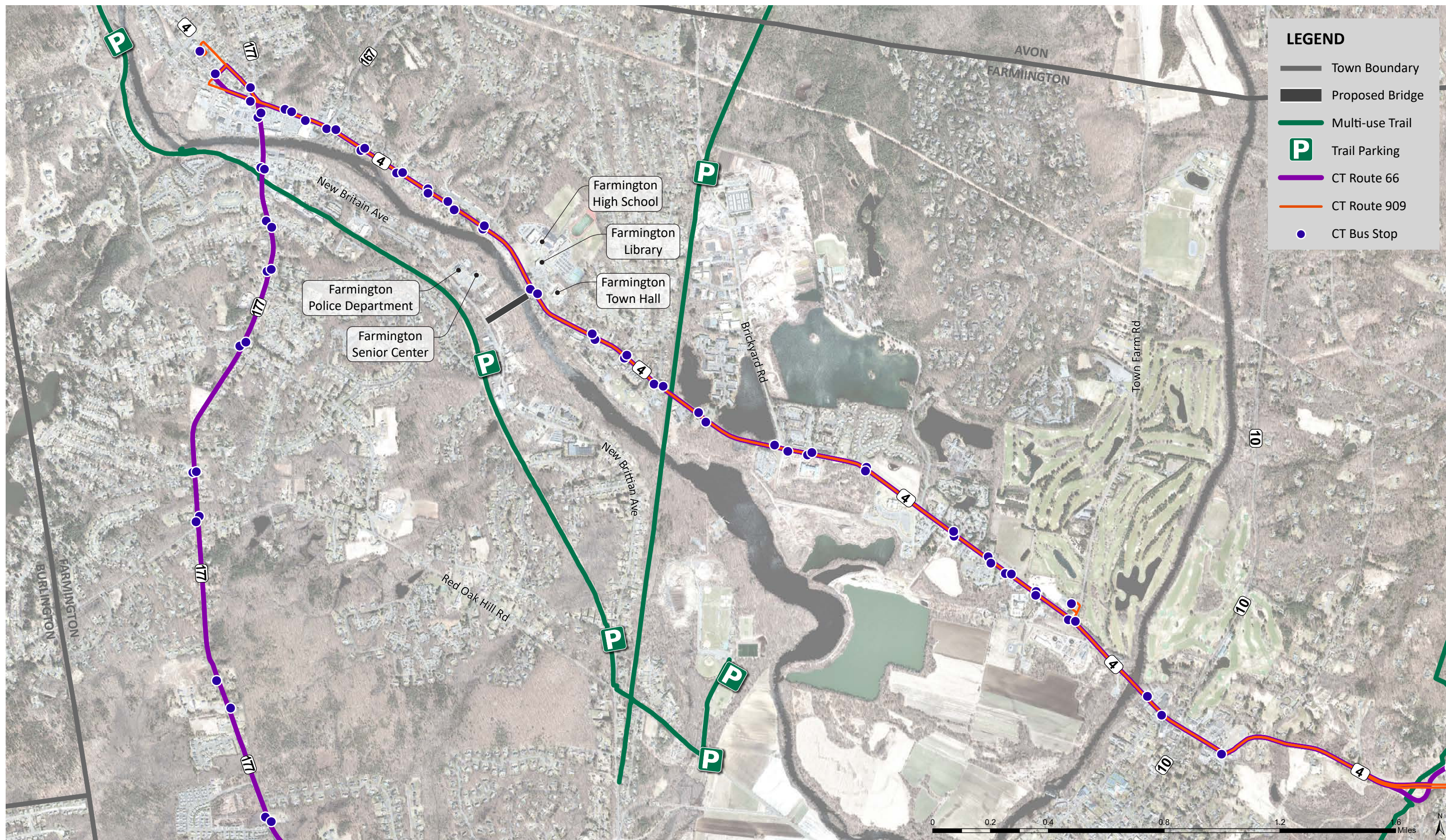
**The Farmington Canal Heritage Trail** is a statewide linear park/greenway that is exclusively for pedestrian and bicycle travel. It begins in New Haven and continues for 54 miles north to the Massachusetts border. Within the study area, the trail runs north/south approximately half a mile from the proposed bridge location.

**The Farmington River Trail** is a local greenway that is exclusively for pedestrian and bicycle travel that forms a 16.5-mile arc that connects to the Farmington Canal Heritage Trail on both ends. Within the study area, the trail follows along the south side of the Farmington River.

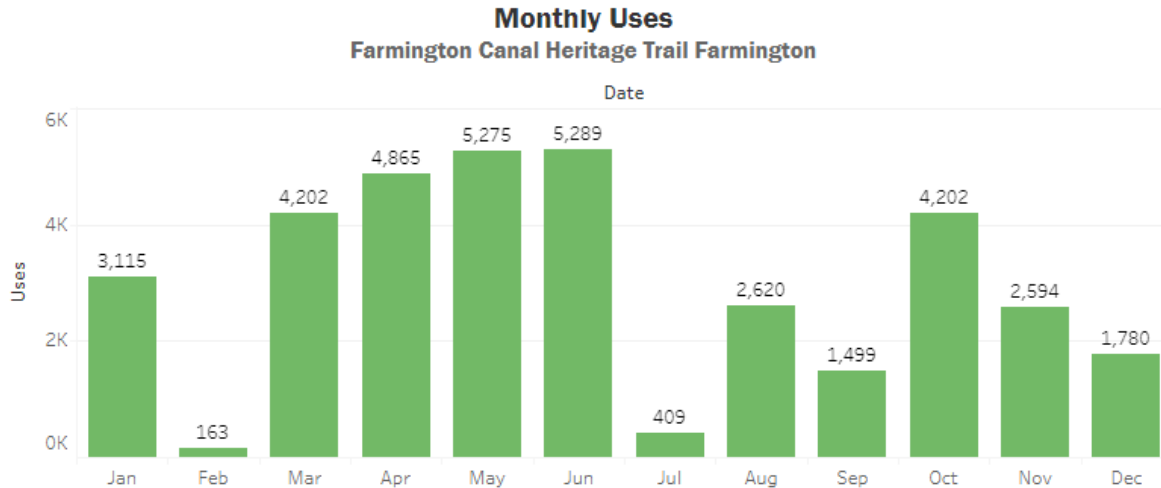
Annual trail count data was obtained from the Connecticut Trail Census. The Connecticut Trail Census is a statewide volunteer data collection program. It is funded by the Connecticut



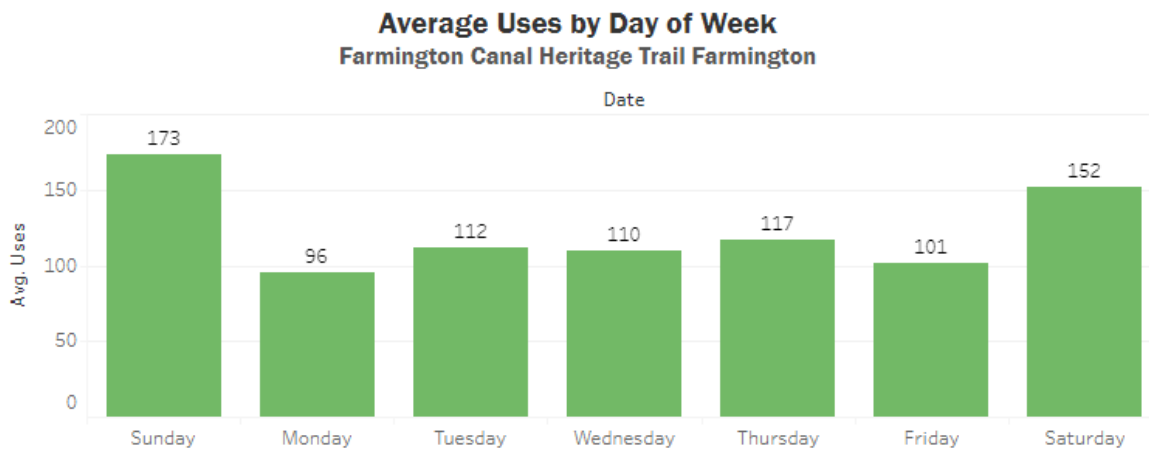
Figure 4 - Regional Transit and Bicycle Amenities



Department of Energy & Environmental Protection (CTDEEP) Recreational Trails Program. The Connecticut Trail Census has an infrared TRAFx count station on the Farmington Canal Heritage Trail near its intersection with the Farmington River Trail in the town of Farmington. This station saw a total of 36,013 users and an average daily use of 123 people in 2021 (January 1 through December 31).



Source: [UConn CLEAR](#)



Source: [UConn CLEAR](#)

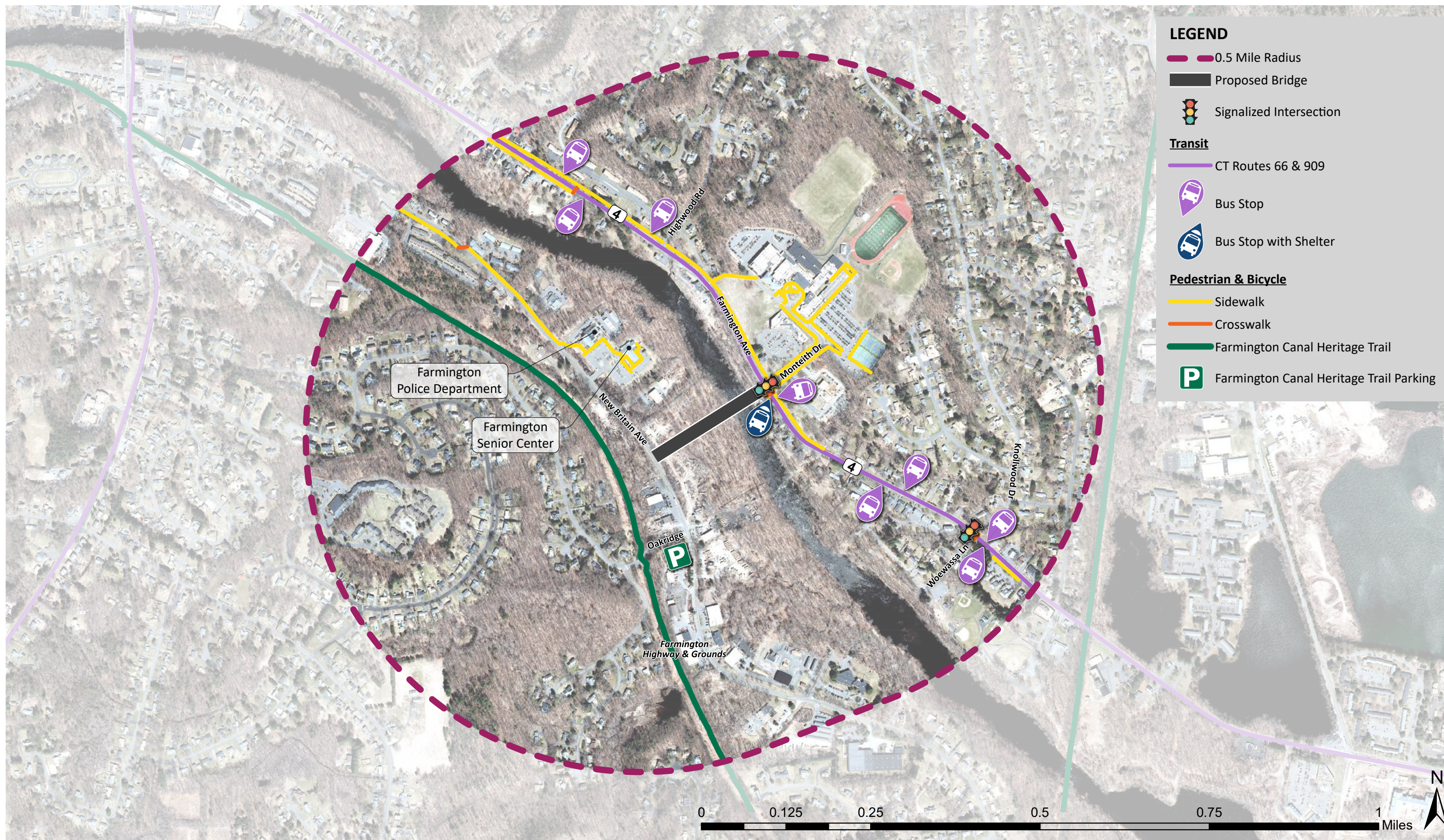
### 2.3.2 Adjacent Facilities

The existing multimodal facilities within a half mile of the proposed Monteith Drive bridge were accessed. A half-mile radius was used because this distance typically equates to roughly a 20-minute walk, and a half mile or less is typically used as an acceptable walking distance for nonrecreational travel.

Figure 5 displays the adjacent pedestrian, bicycle, and transit amenities.



Figure 5 - Adjacent Pedestrian, Bicycle, and Transit Amenities



### 2.3.3 Transit

CTtransit bus stops are available every 1,500 feet along both sides of Farmington Avenue (Route 4) near the proposed Monteith Drive bridge. The bus stops are marked with a small sign; however, no other amenities (shelters, waiting areas, benches, or trash cans) are provided except for the bus stop at the intersection Farmington Avenue (Route 4) and Monteith Drive. At this stop, a shelter and bench are provided. There are no transit routes or facilities along New Britain Avenue.



Source: 2022 Google

### 2.3.4 Pedestrian

Within the immediate study area, sidewalks are available on the north side of Farmington Avenue (Route 4) beginning approximately 700 feet east of Monteith Drive and extending west of the Farmington Town Complex toward Route 177. On the south side of the roadway, sidewalks exist between the midblock crosswalk located about 2,000 feet west of Monteith Drive and Walnut Street. The sidewalks are approximately 4 feet wide with a landscape buffer. Along with the sidewalks, crosswalks are available at the signalized intersections of Farmington Avenue (Route 4) at Monteith Drive and Knollwood Drive/Woewassa Lane.

Sidewalks are available on the north side of New Britain Avenue from the Farmington Senior Center to approximately 1,500 feet west where it transitions to the south side of the roadway at a midblock crosswalk. The sidewalks are approximately 4 feet wide with a landscape buffer.

As shown in the figure, large sidewalk gaps exist along Farmington Avenue (Route 4) and New Britain Avenue near the proposed Monteith Drive bridge. Additionally, there is no pedestrian access to the Farmington River near the proposed Monteith Drive bridge.

### 2.3.5 Bicycle



On street bicycle facilities are not provided along Farmington Avenue (Route 4) or New Britain Avenue near the proposed Monteith Drive bridge. The only bicycle facilities within the study area are the Farmington Canal Heritage Trail and the Farmington River Trail. Near the proposed Monteith Drive bridge, the Farmington River Trail runs parallel to New Britain Avenue. Parking for the trail near the proposed Monteith Drive bridge is provided at the intersection of New Britain Avenue and Oakridge.

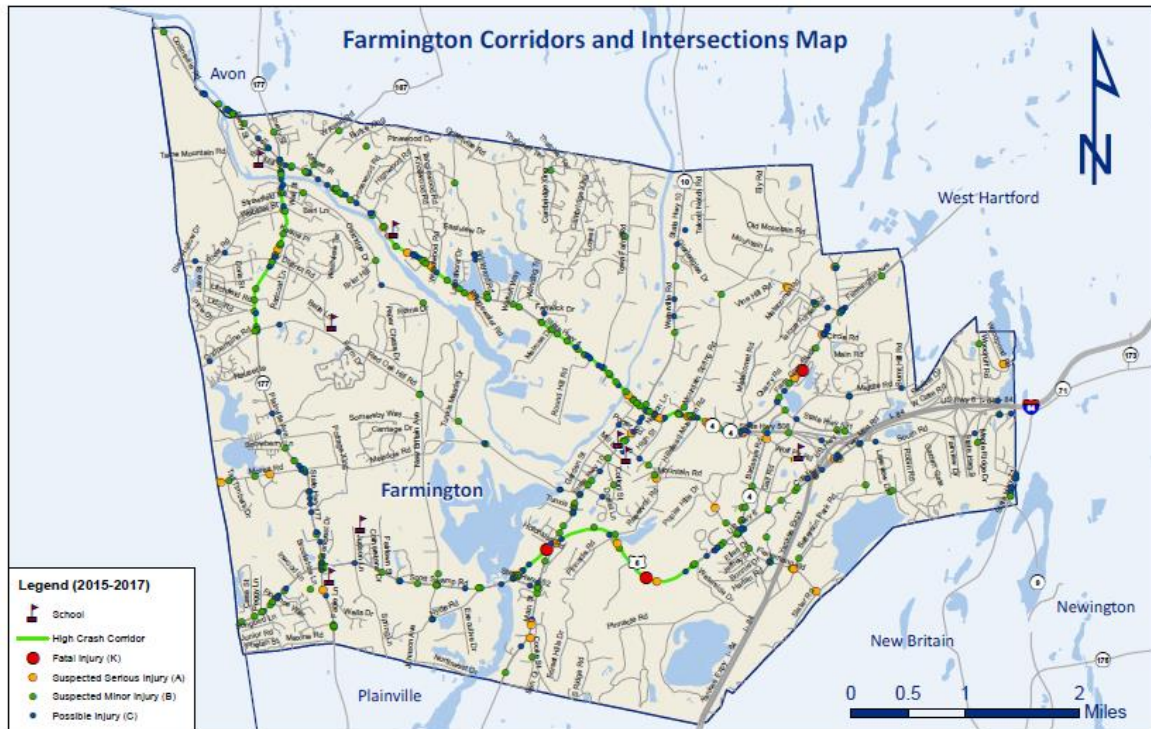
## 2.4 Crash History

Regional safety plans and adjoining traffic crash statistics were reviewed to identify known crash patterns near the proposed Monteith Drive bridge.

### 2.4.1 Regional Transportation Safety Plan

In 2020, CRCOG and CTDOT completed a Regional Transportation Safety Plan (Capitol RTSP 2020) to serve as a road map to reduce fatal and injury crashes in the region. The plan identified the region's high crash frequency locations using 2015 to 2017 crash data and outlined effective countermeasures and strategies to reduce crashes and help the region prioritize new projects.





Source: Transportation Safety Plan, Capitol Region Connecticut, 2020

The Capitol RTSP 2020 identified that congestion in Unionville, the limited capacity of the truss bridge over the Farmington River, US Route 6, pedestrian/bicycle mobility, Route 177, Route 4, and congestion on various commuter and school bus routes were the general traffic concerns within Farmington.

One of the region's top crash corridors was Route 6 between Route 10 and Route 552. This short corridor experienced a high number of angle crashes, rear-end crashes, and driveway access conflicts. It was recommended to provide cat tracks to delineate turns at the intersection Route 6 at Route 552 (Study Intersection 25), install traffic signal retroreflective backplates, and manage drive access along the short corridor.

The intersection of Route 177 at Morea Road and Meadow Road (Study Intersection 18) was identified as a major cut through for commuter traffic. It was recommended to add right-turn lanes at all four legs of the intersection. River Road was also identified in Appendix A as a cut through for vehicles to avoid congestion on Route 177. It was recommended to upgrade the signals on Route 177 with retroreflective backplates and increase left-turn clearance.

It is important to note that the Capitol RTSP 2020 did also note that a supplemental structure over the Farmington River would help link the subdivisions to the north and south of the river to the high school, Tunxis Meade, and other destinations and would help alleviate the congestion in the town center and Unionville.



### 2.4.2 Farmington Avenue (Route 4) and New Britain Avenue Crash Summary

To supplement the Regional Transportation Safety Plan, information on traffic crash statistics for Farmington Avenue (Route 4) and New Britain Avenue within a half-mile radius of the proposed Monteith Drive bridge was obtained from the Connecticut Crash Data Repository for the period of January 1, 2018, to December 6, 2021. The crash data collected for Farmington Avenue (Route 4) is shown in **Table 1**, summarized by location.

A total of 33 crashes were reported at the intersections of Route 4 at Walnut Street, Highwood Road, Monteith Drive, Knollwood Road, and Wynwood Road during the roughly 3-year period. Over 66 percent of the reported crashes resulted in property damage only. No fatalities were reported. The most common collision type was rear-end collisions, comprising approximately 79 percent of the reported crashes.

A total of 52 non-intersection crashes were reported on Farmington Avenue (Route 4) between Walnut Street and the Farmington Canal Heritage Trail crossing for the roughly 3-year period. Over 71 percent of the total crashes resulted in property damage only. No fatalities were reported. The most common collision type was rear-end collisions, comprising approximately 62 percent of reported crashes.

One pedestrian collision was reported on Route 4 between Monteith Drive and Knollwood Road. The vehicle was traveling westbound when it hit a pedestrian in the roadway that was reported to be under the influence of medications, drugs, or alcohol. The pedestrian was suspected to have minor injuries after the crash.

**Table 1 Farmington Avenue (Route 4) Crash Summary (2018-2021)**

Location	Crash Severity			Type Of Collision								
	Property Damage Only	Injury	Total	Rear End	Angle	Hit Roadside Fixed Object	Sideswipe (Same Direction)	Sideswipe (Opposite Direction)	Head On	Hit Object In Roadway	Hit Pedestrian	Total
<b>Intersections</b>												
Route 4 at Walnut Street	0	1	1	1	0	0	0	0	0	0	0	1
Route 4 at Highwood Road	5	1	6	6	0	0	0	0	0	0	0	6
Route 4 at Monteith Drive	5	2	7	6	0	0	1	0	0	0	0	7



Route 4 at Knollwood Road	9	3	12	10	1	0	1	0	0	0	0	12
Route 4 at Wyndwood Road	3	4	7	3	1	1	1	0	1	0	0	7
<b>Intersection Total</b>	<b>22</b>	<b>11</b>	<b>33</b>	<b>26</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>33</b>
<b>Road Segments</b>												
Walnut Street – Highwood Road	9	6	15	13	0	1	0	0	1	0	0	15
Highwood Road – Monteith Drive	9	2	11	6	1	1	0	0	1	2	0	11
Monteith Drive – Knollwood Road	9	4	13	5	2	2	1	2	0	0	1	13
Knollwood Road – Wyndwood Road	7	1	8	6	0	1	0	0	0	1	0	8
Wyndwood Road – Trail Crossing	3	2	5	2	3	0	0	0	0	0	0	5
<b>Segment Total</b>	<b>37</b>	<b>15</b>	<b>52</b>	<b>32</b>	<b>6</b>	<b>5</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>52</b>

Source: Connecticut Crash Data Repository from January 1, 2018, to December 6, 2021.

The crash data collected for New Britain Avenue is shown in **Table 2**, summarized by location.

A total of two crashes (one at each location) were reported at the intersections of New Britain Avenue at Haberern Avenue and Oakridge combined during the roughly 3-year period. Both of the reported crashes resulted in property damage only. The crash at the intersection of New Britain Avenue and Haberern Avenue was a rear-end collision. The crash at the intersection of New Britain Avenue and Oakridge was an angle collision. A total of 11 non-intersection crashes were reported on New Britain Avenue between Haberern Avenue and Roma Drive for the roughly 3-year period. Over 63 percent of the total crashes resulted in property damage only. The most common collision type was hit roadside fixed object collisions, comprising approximately 62 percent of reported crashes.

One fatality was reported approximately 1,250 feet south of Oakridge. The crash involved a motorcycle. The motorcycle was traveling southbound negotiating the curve on New Britain Avenue and ran off the right side of the roadway and hit the curb and then a tree. The driver was not wearing a helmet. There were no other contributing circumstances reported; the collision occurred during the daylight on a clear day. **Figure 6** displays the crash severities, and **Figure 7** displays the crash types of the reported crashes within a half-mile radius of the proposed Monteith Drive bridge.



Figure 6 - Crash Severity Collisions Within ½ Mile of Proposed Bridge

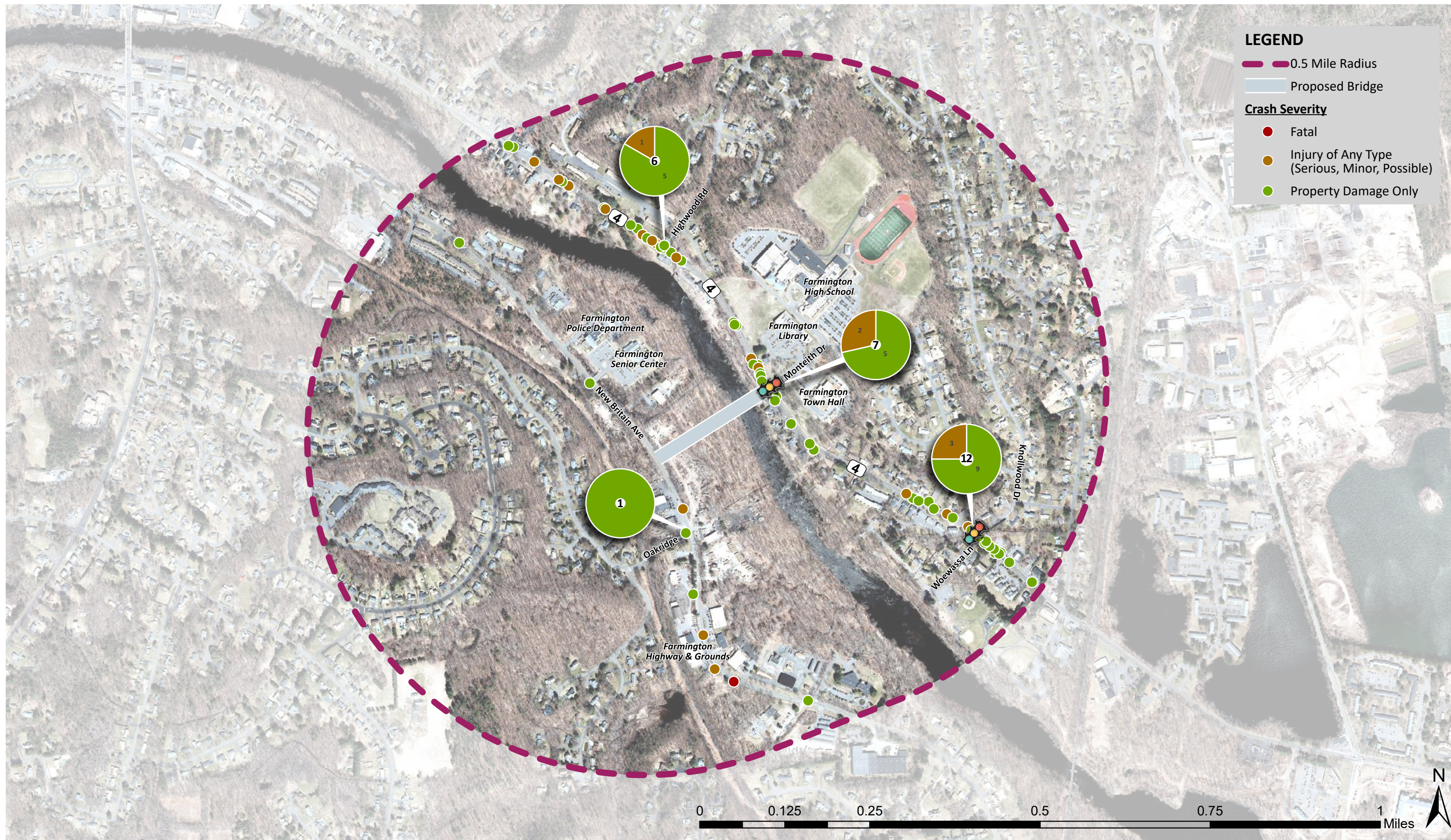
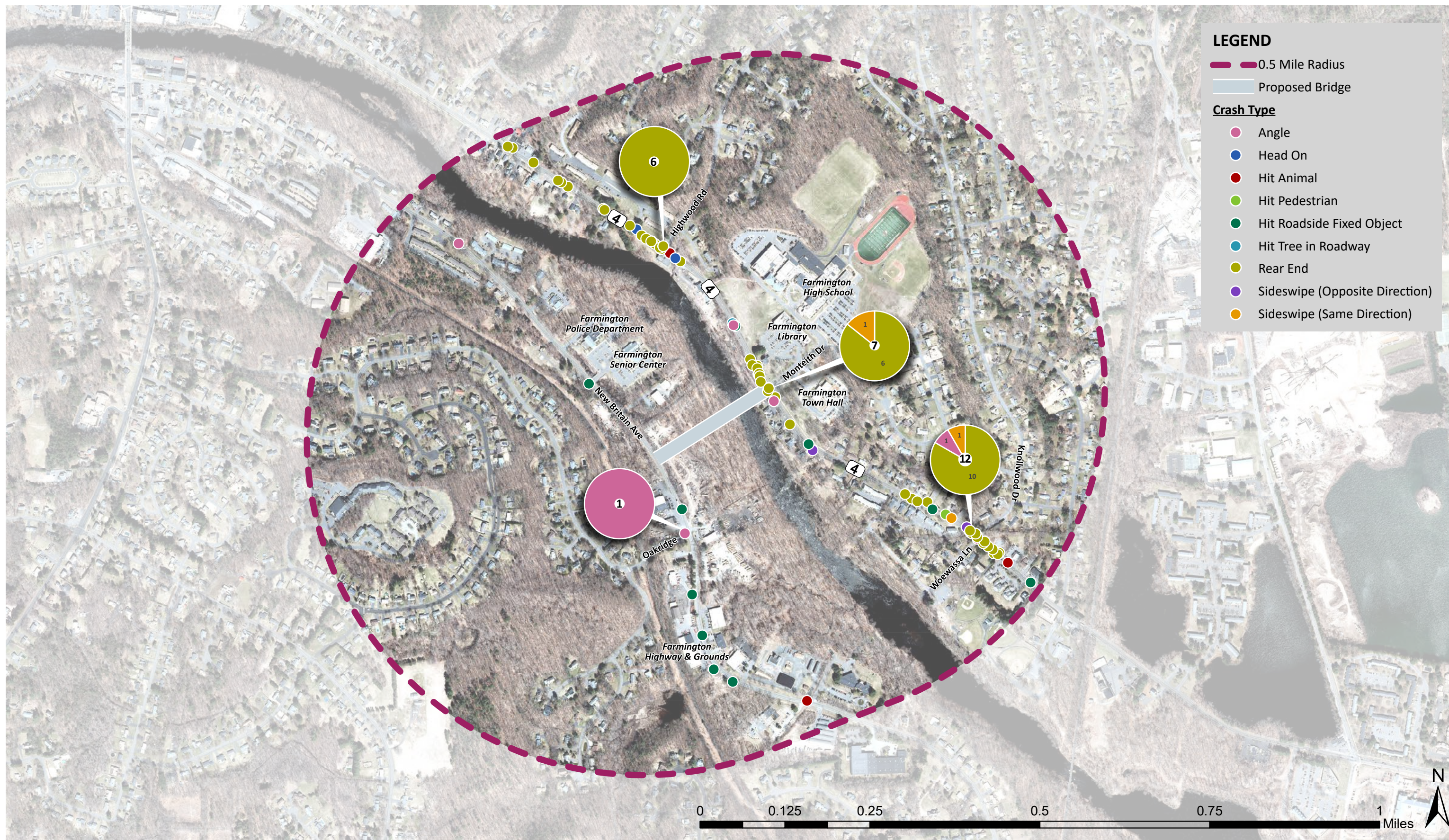


Figure 7 - Crash Types Within ½ Mile of Proposed Bridge



**Table 2 New Britain Avenue Crash Summary (2018-2021)**

Location	Crash Severity				Type Of Collision					
	Property Damage Only	Injury	Fatal	Total	Hit Roadside Fixed Object	Angle	Hit Animal	Rear End	Sideswipe (Same Direction)	Total
<b>Intersections</b>										
New Britain Avenue at Haberern Avenue	1	0	0	1	0	0	0	1	0	1
New Britain Avenue at Oakridge	1	0	0	1	0	1	0	0	0	1
<b>Intersection Total</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>
<b>Road Segments</b>										
Haberern Avenue – Monteith Drive Extension (New Bridge)	3	0	0	3	2	1	0	0	0	3
Monteith Drive Extension – Oakridge	0	1	0	1	1	0	0	0	0	1
Oakridge – Roma Drive	4	2	1	7	5	0	1	0	1	7
<b>Segment Total</b>	<b>7</b>	<b>3</b>	<b>1</b>	<b>11</b>	<b>8</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>11</b>

Source: Connecticut Crash Data Repository from January 1, 2018, to December 6, 2021

## 2.5 Intersection Capacity Analysis

Intersection capacity analysis was performed at the study intersections under Existing (2021) Conditions to evaluate each intersection's ability to process traffic volumes. Intersection operation results are expressed as a level of service (LOS). LOS is used to provide a qualitative evaluation of the efficiency of operations of an intersection in terms of delay and inconvenience based on certain quantitative calculations. A description of the various LOS designations, A through F, is given in Appendix B. LOS A describes operations with very low average control delay per vehicle while LOS F describes operations with long average delays. The study intersections were evaluated using *Synchro 11* (Trafficware) traffic analysis software package. **Table 3** summarizes the capacity analysis findings under Existing (2021) Conditions. The *Synchro* analysis worksheets are included in Appendix C.



**Table 3 Existing (2021) Conditions Capacity Analysis Summary**

Intersection/Lane Group	Level Of Service	
	A.M. Peak Hour	P.M. Peak Hour
<b>Signalized</b>		
<b>1: Canton Rd (RT 179) &amp; Spielman Hwy (RT 4)</b>		
Eastbound Left	C	D
Eastbound Right	A	A
Northbound Left/Through	A	F
Southbound Through/Right	B	B
<b>Overall</b>	<b>B</b>	<b>F</b>
<b>3: S Main St (RT 177)/Lovely St (RT 177) &amp; School St/Farmington Ave (RT 4) &amp; Main St (RT 4)</b>		
Eastbound Left/Through/Right	C	C
Westbound Left/Through	E	E
Westbound Right	B	B
Northbound Left	C	D
Northbound Through	C	C
Southbound Left	D	D
Southbound Through	D	F
Southeastbound Left	D	E
Southeastbound Right	C	D
<b>Overall</b>	<b>C</b>	<b>D</b>
<b>4: Farmington Ave (RT 4) &amp; W Avon Rd (RT 167)</b>		
Eastbound Left	A	A
Eastbound Through	B	A
Westbound Through/Right	B	C
Southbound Left/Right	B	C
<b>Overall</b>	<b>B</b>	<b>B</b>
<b>5: Farmington Ave (RT 4) &amp; Monteith Dr</b>		
Eastbound Left/Through	F	A
Westbound Through/Right	B	A
Southbound Left	E	E
Southbound Right	A	B
<b>Overall</b>	<b>F</b>	<b>A</b>
<b>6: Bridgewater Rd/Brickyard Rd &amp; Farmington Ave (RT 4)</b>		
Eastbound Left	B	B
Eastbound Through/Right	C	C
Westbound Left	B	B
Westbound Through	C	C
Westbound Right	A	A
Northbound Left	C	C



Intersection/Lane Group	Level Of Service	
	A.M. Peak Hour	P.M. Peak Hour
Northbound Through/Right	C	C
Southbound Left	E	D
Southbound Through/Right	C	C
<b>Overall</b>	<b>C</b>	<b>C</b>
<b>7: Garden St &amp; Farmington Ave (RT 4)</b>		
Eastbound Through/Right	B	B
Westbound Left	A	A
Westbound Through	A	A
Northbound Left/Right	F	F
<b>Overall</b>	<b>B</b>	<b>B</b>
<b>8: Main St/Waterville Rd (RT 10) &amp; Farmington Ave (RT 4)</b>		
Eastbound Left	B	B
Eastbound Through	C	C
Eastbound Right	C	C
Westbound Left	C	C
Westbound Through/Right	D	D
Northbound Left	E	F
Northbound Through	F	E
Northbound Right	E	D
Southbound Left/Through/Right	E	E
<b>Overall</b>	<b>D</b>	<b>D</b>
<b>9: High St/Backage Rd &amp; Farmington Ave (RT 4)</b>		
Eastbound Left	A	A
Eastbound Through/Right	A	B
Westbound Left	A	A
Westbound Through/Right	A	B
Northbound Left/Through	E	E
Northbound Right	B	B
Southbound Left/Through/Right	E	E
<b>Overall</b>	<b>A</b>	<b>B</b>
<b>10: W Avon Rd (RT 167) &amp; Sycamore Hills Rd/Scoville Rd</b>		
Eastbound Left/Through/Right	C	C
Westbound Left/Through/Right	C	C
Northbound Left/Through/Right	C	C
Southbound Left/Through/Right	B	B
<b>Overall</b>	<b>C</b>	<b>B</b>
<b>13: Stafford Ave &amp; Stevens St</b>		
Eastbound Left/Through/Right	C	C
Westbound Left/Through/Right	B	C



Intersection/Lane Group	Level Of Service	
	A.M. Peak Hour	P.M. Peak Hour
Northbound Left/Through/Right	D	F
Southbound Left/Through/Right	D	C
<b>Overall</b>	<b>C</b>	<b>D</b>
<b>14: S Main St (RT 177) &amp; Mill St</b>		
Eastbound Left/Through	D	D
Eastbound Right	C	B
Westbound Left/Through	D	D
Westbound Right	D	C
Northbound Left	A	A
Northbound Through/Right	A	A
Southbound Left	B	B
Southbound Through/Right	B	C
<b>Overall</b>	<b>B</b>	<b>C</b>
<b>15: S Main St (RT 177) &amp; Railroad Ave/New Britain Ave</b>		
Eastbound Left/Through/Right	C	D
Westbound Left/Through	C	D
Westbound Right	B	C
Northbound Left	B	B
Northbound Through/Right	B	C
Southbound Left	B	B
Southbound Through/Right	A	A
<b>Overall</b>	<b>B</b>	<b>B</b>
<b>17: Plainville Ave (RT 177) &amp; Coppermine Rd</b>		
Eastbound Left/Through/Right	D	D
Westbound Left/Through/Right	C	C
Northbound Left/Through/Right	B	B
Southbound Left/Through/Right	C	B
<b>Overall</b>	<b>C</b>	<b>C</b>
<b>18: Plainville Ave (RT 177) &amp; Morea Rd/Meadow Rd</b>		
Eastbound Left/Through/Right	D	D
Westbound Left/Through/Right	C	D
Northbound Left	B	B
Northbound Through/Right	C	C
Southbound Left	A	A
Southbound Through/Right	C	C
<b>Overall</b>	<b>C</b>	<b>C</b>
<b>19: Plainville Ave (RT 177) &amp; Scott Swamp Rd (US 6)</b>		
Eastbound Left	F	F
Eastbound Through	F	D



Intersection/Lane Group	Level Of Service	
	A.M. Peak Hour	P.M. Peak Hour
Eastbound Right	B	B
Westbound Left	E	F
Westbound Through/Right	C	D
Northbound Left	C	C
Northbound Through	E	F
Northbound Right	A	A
Southbound Left	D	D
Southbound Through/Right	D	D
<b>Overall</b>	<b>E</b>	<b>E</b>
<b>20: Unionville Ave (RT 177) &amp; Northwest Dr</b>		
Eastbound Left	B	C
Eastbound Through/Right	C	D
Westbound Left	B	C
Westbound Through/Right	C	C
Northbound Left	B	C
Northbound Through/Right	C	D
Southbound Left	B	C
Southbound Through/Right	C	C
<b>Overall</b>	<b>C</b>	<b>C</b>
<b>23: New Britain Ave &amp; Scott Swamp Rd (US 6)</b>		
Eastbound Left	D	D
Eastbound Through/Right	B	B
Westbound Left	C	D
Westbound Through	B	B
Westbound Right	A	A
Northbound Left	D	C
Northbound Through/Right	C	D
Southbound Left	D	C
Southbound Through/Right	C	D
<b>Overall</b>	<b>B</b>	<b>B</b>
<b>24: Hyde Rd &amp; Scott Swamp Rd (US 6)</b>		
Eastbound Left	D	D
Eastbound Through/Right	A	A
Westbound Left	D	D
Westbound Through/Right	A	A
Northbound Left/Through	C	C
Northbound Right	A	B
Southbound Left/Through	C	D
Southbound Right	A	A



Intersection/Lane Group	Level Of Service	
	A.M. Peak Hour	P.M. Peak Hour
<b>Overall</b>	<b>A</b>	<b>A</b>
<b>25: Scott Swamp Rd (RT 552) &amp; Scott Swamp Rd (US 6)/Colt Hwy (US 6)</b>		
Eastbound Through	A	B
Eastbound Right	A	A
Westbound Left	D	D
Westbound Through	A	A
Northbound Left/Right	D	D
<b>Overall</b>	<b>B</b>	<b>B</b>
<b>26: Main St (RT 10) &amp; Meadow Rd</b>		
Eastbound Left/Right	C	D
Northbound Left/Through	D	F
Southbound Left/Right	D	D
<b>Overall</b>	<b>D</b>	<b>F</b>
<b>Unsignalized</b>		
<b>2: River Road &amp; Collinsville Rd (RT 4)</b>		
Northbound Left	C	E
Northbound Right	B	B
Westbound Left	A	A
<b>11: Harris Rd/W Avon Rd (RT 167) &amp; W Avon Rd (RT 167)</b>		
Eastbound Left/Right	C	B
Northbound Left/Through	B	B
Southbound Through/Right	C	E
<b>Overall</b>	<b>C</b>	<b>D</b>
<b>12: Burlington Rd &amp; River Rd</b>		
Eastbound Left	A	A
Southbound Left/Right	B	B
<b>16: S Main St (RT 177) &amp; Webster St</b>		
Northbound Left	A	A
Eastbound Left/Right	C	E
<b>21: New Britain Ave &amp; Red Oak Hill Rd</b>		
Eastbound Left/Through/Right	B	B
Westbound Left/Through/Right	A	C
Northbound Left/Through/Right	A	C
Southbound Left/Through/Right	B	C
<b>Overall</b>	<b>B</b>	<b>C</b>
<b>22: New Britain Ave &amp; Meadow Rd</b>		
Eastbound Left/Through/Right	B	B
Westbound Left/Through/Right	A	B



Intersection/Lane Group	Level Of Service	
	A.M. Peak Hour	P.M. Peak Hour
Northbound Left/Through/Right	B	C
Southbound Left/Through/Right	B	B
<b>Overall</b>	<b>B</b>	<b>C</b>
<b>27: New Britain Ave &amp; Oakridge</b>		
Northbound Left	A	A
Eastbound Left/Right	A	B
<b>28: New Britain Ave &amp; Coppermine Rd</b>		
Northbound Left	A	A
Eastbound Left/Right	B	B
<b>29: W District Rd &amp; Whispering Rod Rd/Chaffee Ln</b>		
Eastbound Left/Through/Right	A	A
Westbound Left/Through/Right	A	A
Northbound Left/Through/Right	A	A
Southbound Left/Through/Right	A	A
<b>Overall</b>	<b>A</b>	<b>A</b>

Note: Total delay associated with LOS are presented in Appendix C (Pages 110-188)

**Figure 8** displays the overall intersection capacity analysis findings under Existing (2021) Conditions.

It is important to note that LOS A to LOS D is generally considered acceptable conditions. However, in some cases LOS E is deemed acceptable and can indicate an efficient tradeoff between traffic flow and the amount of land devoted to the movement of motor vehicles.

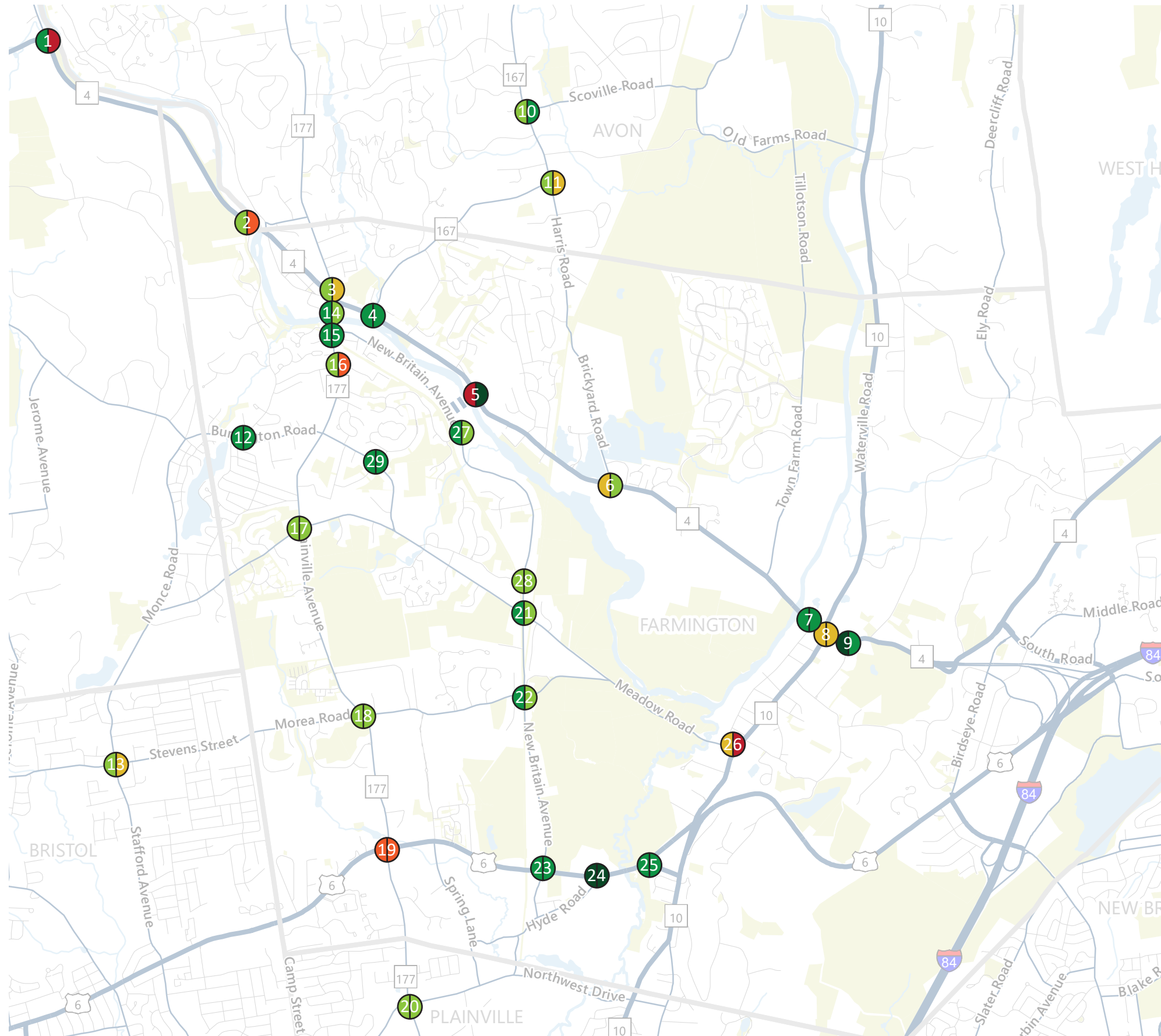
As shown in the table, the following intersections are expected to operate at an unacceptable level of service (LOS F) for some movements under Existing (2021) Conditions during the a.m. and p.m. peak hours.

### 2.5.1 Signalized Intersections

- **Intersection #1:** Canton Road (Route 179) at Spielman Highway (Route 4) experienced overall LOS F during the p.m. peak hour and LOS F for the northbound left/through movements.
- **Intersection #3:** South Main Street (Route 177) at Farmington Avenue (Route 4) and Main Street (Route 4) experienced LOS F at the southbound through movement during the p.m. peak hour.
- **Intersection #5:** Farmington Avenue (Route 4) at Monteith Drive experienced overall LOS F during the a.m. peak hour and LOS F for the eastbound left/through movements.
- **Intersection #6:** Bridgewater Road/Brickyard Road at Farmington Avenue (Route 4) experienced LOS F at the southbound left movement during the a.m. and p.m. peak hours.
- **Intersection #7:** Garden Street at Farmington Avenue (Route 4) experienced LOS F at the northbound left/right-turn movements during the a.m. and p.m. peak hour.



Figure 8 - Existing (2021) Conditions Overall LOS Findings



INTERSECTION/LANE GROUP	OVERALL LEVEL OF SERVICE	
	A.M.	P.M.
<b>SIGNALIZED</b>		
1: Canton Rd (RT 179) & Spelman Hwy (RT 4)	B	F
3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)	C	D
4: Farmington Ave (RT 4) & W Avon Rd (RT 167)	B	B
5: Farmington Ave (RT 4) & Monteith Dr	F	A
6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)	C	C
7: Garden St & Farmington Ave (RT 4)	B	B
8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4)	D	D
9: High St/Backage Rd & Farmington Ave (RT 4)	A	B
10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd	C	B
13: Stafford Ave & Stevens St	C	D
14: S Main St (RT 177) & Mill St	B	C
15: S Main St (RT 177) & Railroad Ave/New Britain Ave	B	B
17: Plainville Ave (RT 177) & Coopermine Rd	C	C
18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd	C	C
19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)	E	E
20: Unionville Ave (RT 177) & Northwest Dr	C	C
23: New Britain Ave & Scott Swamp Rd (US 6)	B	B
24: Hyde Rd & Scott Swamp Rd (US 6)	A	A
25: Scott Swamp Rd (RT 552) & Scott Swamp Rd (US 6)/Colt Hwy (US 6)	B	B
26: Main St (RT 10) & Meadow Rd	D	F
<b>UNSIGNALIZED</b>		
2: River Road & Collinsville Rd (RT 4)	C	E
11: Harris Rd/W Avon Rd (RT 167) & W Avon Rd (RT 167)	C	D
12: Burlington Rd & River Rd	B	B
16: S Main St (RT 177) & Webster St	C	E
21: New Britain Ave & Red Oak Hill Rd	B	C
22: New Britain Ave & Meadow Rd	B	C
27: New Britain Ave & Oakridge	A	B
28: New Britain Ave & Coppermine Rd	B	B
29: W District Rd & Whispering Rod Rd/Chaffee Ln	A	A

Notes: LOS calculations were performed using Synchro 11.

**LEGEND**

⊕ A.M. | P.M. Peak-Hour Overall LOS

**Level of Service (LOS)**

- A - Primarily free-flow operation
- B - Reasonably unimpeded operation
- C - Stable operation
- D - Less stable condition
- E - Unstable operation and significant delay
- F - Flow at extremely low speed



- **Intersection #8:** Main Street/Waterville Road (Route 10) at Farmington Avenue (Route 4) experienced LOS F at the northbound through and left-turn movements during the a.m. and p.m. peak hours respectively.
- **Intersection #13:** Stafford Avenue at Stevens Street experienced LOS F at the northbound left/through/right movements during the p.m. peak hour.
- **Intersection #19:** Plainville Avenue (Route 177) at Scott Swamp Road (US Route 6) experienced LOS F at the eastbound left-turn and through movements during the a.m. peak hour and at the eastbound left-turn, westbound left-turn, and northbound through movements during the p.m. peak hour.
- **Intersection #26:** Main Street (Route 10) at Meadow Road experienced LOS F at the northbound left/through movements and overall during the p.m. peak hour.

## 2.6 Intersection Queue Analysis

The queues at the study intersections were also evaluated using *Synchro 11 (Trafficware)* traffic analysis software package. For analysis, the average and 95<sup>th</sup> percentile queues are recorded. The 95<sup>th</sup> percentile queue is the queue length (in feet) that has a 5 percent probability of being exceeded during the peak period. It is important to note that the 95<sup>th</sup> percentile queue typically is used to determine the length of turn lanes, but it is not typical of what an average driver would experience. The average queue is the queue length (in feet) that represents a driver's typical experience. The queue analysis findings under Existing (2021) Conditions and *Synchro* analysis worksheets are included in Appendix C.



## 3.0 Future Conditions

To evaluate the future local and regional traffic impacts associated with the proposed new bridge crossing, intersection capacity analysis was performed at the study intersections under Future (2050) Conditions for the following scenarios:

**Scenario 1 – 2050 No-Build** - Future no-build traffic conditions with only the existing Route 177 bridge (without the proposed Monteith Drive bridge connection)

**Scenario 2 – 2050 Build** - Future build traffic conditions with both the existing Route 177 bridge and the proposed bridge Monteith Drive bridge in place

The Scenario 1 (2050 No-Build Conditions) and Scenario 2 (2050 Build Conditions) traffic volumes were developed by CRCOG using its Travel Demand Model (TDM) and existing peak-hour traffic volumes collected in October 2021.

The CRCOG TDM is a state-of-the-practice, four-step, time-of-day regional TDM designed to estimate travel flows for the greater Hartford area. It is built with *TransCAD* modeling software, which is created and sold by the Caliper Corporation. The basic household and jobs data used in the TDM come from the US Census Bureau and CT Department of Labor, respectively. The CRCOG TDM generates travel estimates for a base year of 2018 and 2035, 2040, and 2050 forecast years for the CRCOG planning area and covers a significant portion of north-central Connecticut as well as south-central Massachusetts. The demand model's four steps use a household cross-classification trip production model for trip generation, a destination choice model for trip distribution, a nested logit model for mode choice, and an equilibrium trip assignment routine for trip assignment.

### 3.1 Scenario 1 – 2050 No-Build

Scenario 1 is reflective of Future (2050) Conditions without the proposed new bridge crossing. The traffic patterns in this scenario are similar to existing traffic patterns, which rely heavily on the South Main Street (Route 177) bridge to cross the Farmington River.

As stated previously, base Scenario 1 (2050 No-Build Conditions) peak-hour traffic volumes were developed by CRCOG using its TDM and the existing peak-hour traffic volumes. Based on correspondence with the Town of Farmington, CTDOT, and our knowledge of the area, two planned developments were added to the base Scenario 1 volumes: the new Farmington High School and a mixed-use development (known as Midpoint) to be located at 1349, 1371, 8218, and 8237 Farmington Avenue in Farmington. The trip assignment for the proposed Farmington High School was obtained from a traffic study that was prepared by SLR in February 2022. The trip assignment for the proposed Midpoint Master Plan development was obtained from a traffic study that is currently being prepared by SLR. The site-generated traffic volumes assumed for the background projects are included in Appendix D. The resultant Scenario 1 (2050 No-Build Conditions) peak-hour traffic volumes are shown in **Figure 9a** and **Figure 9b**.

### 3.2 Scenario 2 – 2050 Build

Scenario 2 is reflective of Future (2050) Conditions once the proposed new bridge crossing is built and operational. This scenario evaluates traffic patterns in the study area with two bridges in operation, the South Main Street (Route 177) and Monteith Drive bridges.

Similar to the methodology for Scenario 1, the base Scenario 2 (2050 Build Conditions) traffic volumes were developed by CRCOG using its TDM and the existing peak-hour traffic volumes. The Scenario 2 (2050 Build Conditions) TDM was used to determine new traffic patterns with



Figure 9a - Scenario 1 (2050 No-Build Conditions) Peak-Hour Traffic Volumes (Intersections 1-16)

<p><b>1</b></p> <p>185 [370] 338 [323]</p> <p>Canton Rd (Rt 179)</p> <p>Spielman Hwy (Rt 4)</p> <p>277 [292]</p> <p>469 [444]</p> <p>235 [576] 224 [494]</p>	<p><b>2</b></p> <p>623 [523] 131 [119]</p> <p>River Rd</p> <p>409 [622] 201 [155]</p> <p>Collinsville Rd (Rt 4)</p> <p>69 [159] 192 [147]</p>	<p><b>3</b></p> <p>6 [7] 421 [474] 145 [134] 4 [4]</p> <p>53 [70] 221 [479] 76 [42] 166 [258]</p> <p>Farmington Ave (Rt 4)</p> <p>0 [5] 0 [0] 92 [105] 33 [21]</p> <p>S Main St (Rt 177)</p> <p>19 [0] 107 [195] 279 [237] 282 [355]</p>	<p><b>4</b></p> <p>173 [163] 55 [58]</p> <p>W Avon Rd (Rt 167)</p> <p>39 [40] 476 [435]</p> <p>Farmington Ave (Rt 4)</p> <p>215 [245] 694 [791]</p>
<p><b>5</b></p> <p>141 [91] 175 [70]</p> <p>Monteith Dr</p> <p>451 [54] 450 [731]</p> <p>Farmington Ave (Rt 4)</p> <p>277 [82] 587 [766]</p>	<p><b>6</b></p> <p>76 [103] 30 [30] 411 [307]</p> <p>Brickyard Rd</p> <p>166 [284] 563 [681] 56 [56]</p> <p>Farmington Ave (Rt 4)</p> <p>56 [102] 639 [727] 18 [43]</p> <p>Bridgewater Rd</p> <p>18 [65] 3 [43] 36 [67]</p>	<p><b>7</b></p> <p>1168 [1262] 111 [124]</p> <p>Garden St</p> <p>726 [880] 15 [14]</p> <p>Farmington Ave (Rt 4)</p> <p>175 [124] 43 [16]</p>	<p><b>8</b></p> <p>21 [9] 130 [176] 254 [219]</p> <p>Waterville Rd (Rt 10)</p> <p>239 [93] 572 [713] 54 [84]</p> <p>Farmington Ave (Rt 4)</p> <p>11 [1] 1148 [1032] 128 [242]</p> <p>99 [196] 145 [145] 124 [82]</p>
<p><b>9</b></p> <p>3 [3] 0 [3] 4 [6]</p> <p>Backage Rd</p> <p>7 [5] 879 [847] 28 [48]</p> <p>Farmington Ave (Rt 4)</p> <p>8 [7] 1462 [1309] 34 [45]</p> <p>High St</p> <p>31 [77] 1 [1] 178 [76]</p>	<p><b>10</b></p> <p>3 [37] 481 [528] 149 [58]</p> <p>W Avon Rd (Rt 167)</p> <p>66 [97] 4 [2] 78 [59]</p> <p>Scoville Rd</p> <p>5 [10] 1 [9] 0 [7]</p> <p>Sycamore Hills Rd</p> <p>2 [3] 367 [481] 111 [61]</p>	<p><b>11</b></p> <p>120 [321] 374 [332]</p> <p>W Avon Rd (Rt 167)</p> <p>291 [214] 96 [43]</p> <p>Harris Rd</p> <p>34 [65] 182 [313]</p>	<p><b>12</b></p> <p>99 [197] 49 [45]</p> <p>River Rd</p> <p>21 [89] 33 [157]</p> <p>Burlington Rd</p> <p>113 [182] 192 [87]</p>
<p><b>13</b></p> <p>38 [50] 205 [226] 46 [23]</p> <p>Stafford Ave</p> <p>20 [36] 128 [324] 84 [75]</p> <p>Stevens St</p> <p>32 [43] 285 [173] 110 [69]</p> <p>63 [151] 140 [287] 60 [69]</p>	<p><b>14</b></p> <p>22 [21] 656 [650] 7 [6]</p> <p>S Main St (Rt 177)</p> <p>14 [14] 24 [26] 85 [95]</p> <p>Mill St</p> <p>43 [49] 26 [27] 99 [124]</p> <p>111 [122] 616 [635] 131 [125]</p>	<p><b>15</b></p> <p>4 [4] 586 [638] 195 [214]</p> <p>S Main St (Rt 177)</p> <p>178 [158] 3 [3] 18 [17]</p> <p>New Britain Ave</p> <p>7 [8] 8 [9] 31 [35]</p> <p>12 [11] 710 [719] 20 [21]</p>	<p><b>16</b></p> <p>58 [61] 557 [854]</p> <p>Plainville Ave (Rt 177)</p> <p>52 [34] 140 [57]</p> <p>Webster St</p> <p>51 [85] 696 [780]</p>

**LEGEND**

- # Signalized Study Intersection
- # Unsignalized Study Intersection
- ← X [Y] Weekday AM [PM] Peak Hour Vehicle Volume

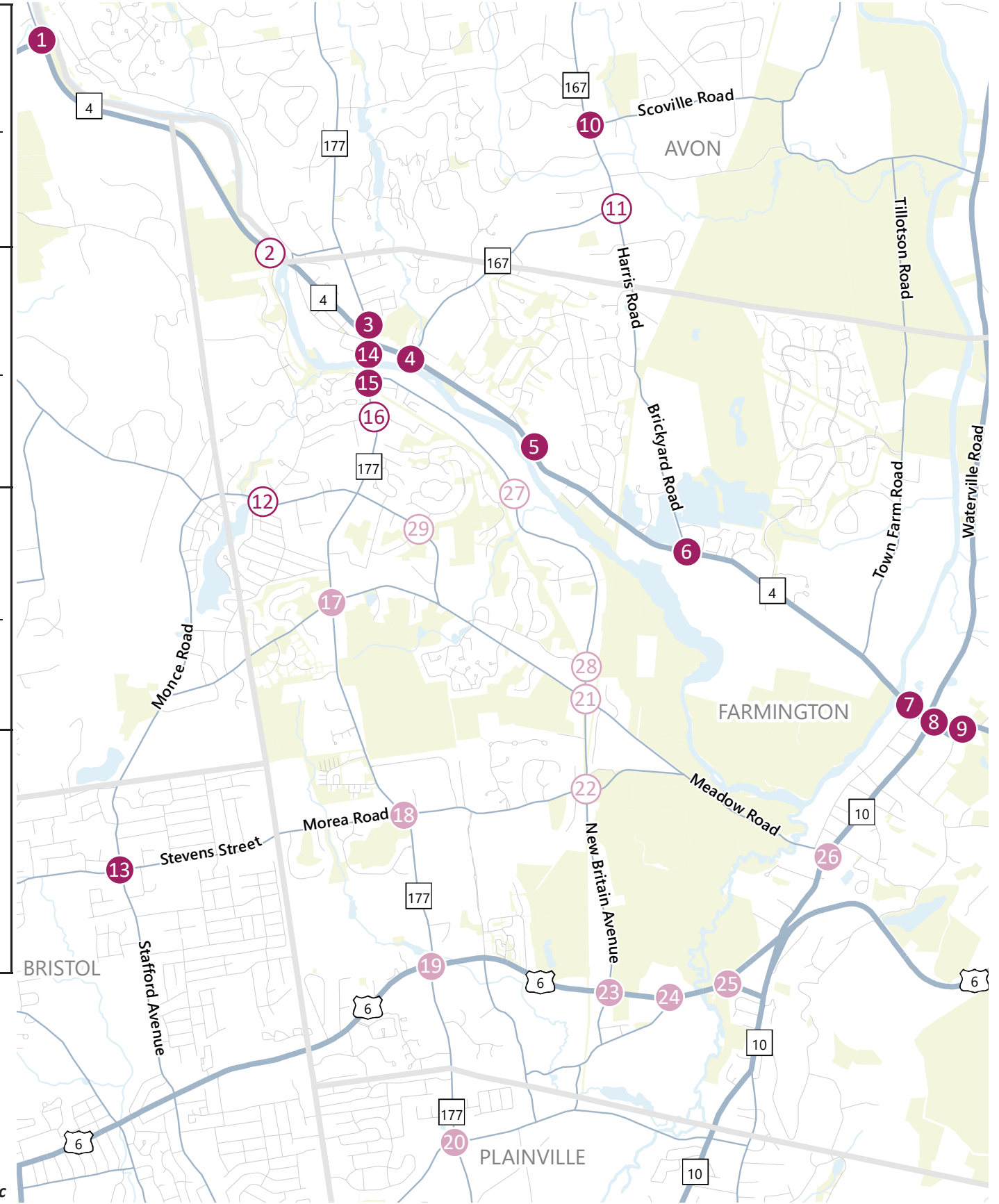
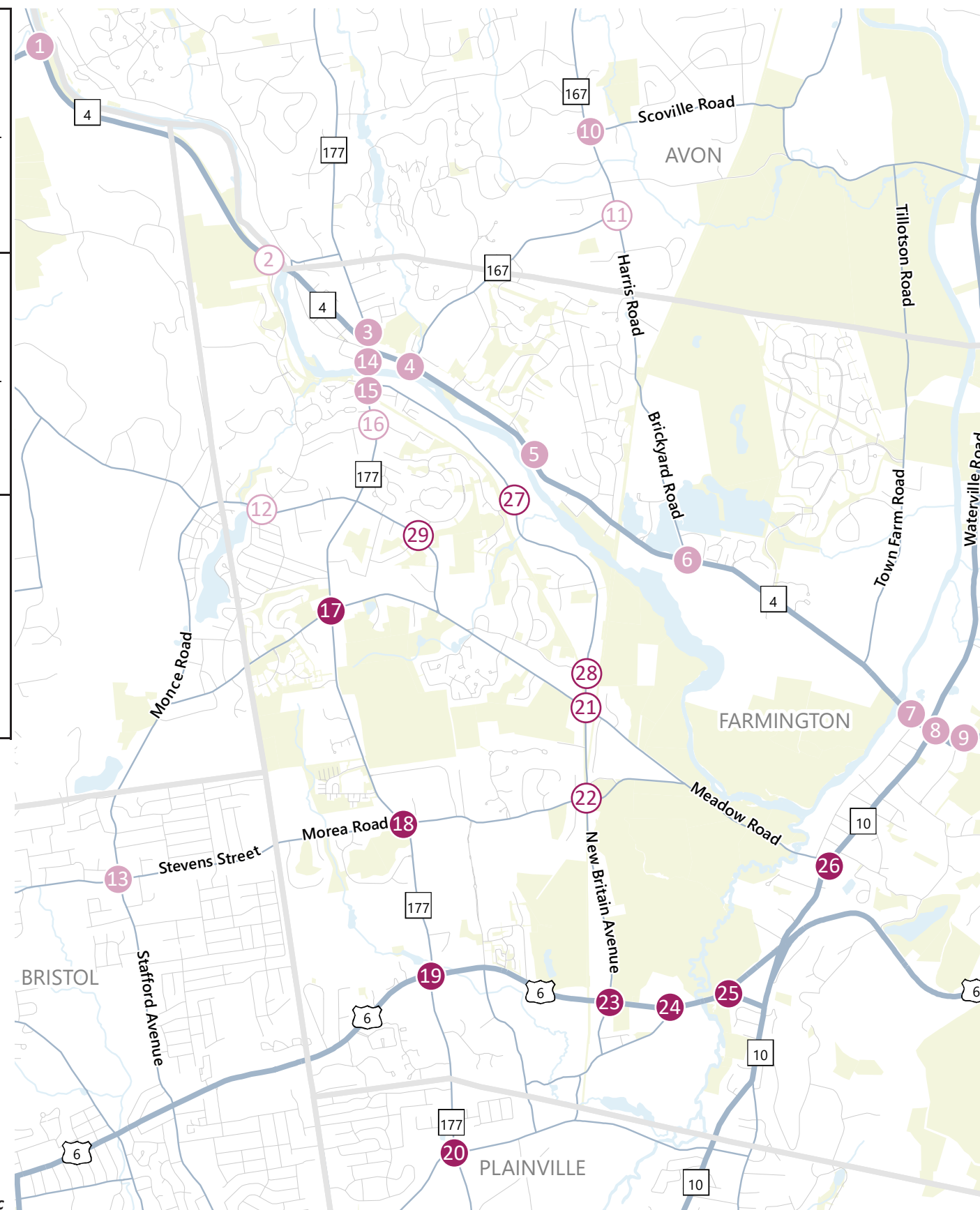


Figure 9b - Scenario 1 (2050 No-Build Conditions) Peak-Hour Traffic Volumes (Intersections 17-29)

<p><b>17</b></p> <p>102 [191] 706 [599] 47 [33]</p> <p>Plainville Ave (Rt 177)</p> <p>17 [53] 29 [104] 51 [50]</p> <p>Coppermine Rd</p> <p>168 [146] 87 [54] 67 [30]</p> <p>40 [85] 577 [850] 57 [59]</p>	<p><b>18</b></p> <p>24 [51] 841 [607] 80 [61]</p> <p>Morea Rd</p> <p>Plainville Ave (Rt 177)</p> <p>34 [93] 50 [201] 17 [38]</p> <p>Meadow Rd</p> <p>49 [30] 183 [91] 273 [151]</p> <p>109 [303] 554 [964] 29 [25]</p>	<p><b>19</b></p> <p>70 [132] 866 [566] 255 [175]</p> <p>Plainville Ave (Rt 177)</p> <p>67 [287] 277 [739] 105 [173]</p> <p>Scott Swamp Rd (Rt 6)</p> <p>90 [143] 709 [422] 171 [132]</p> <p>103 [139] 512 [840] 147 [100]</p>	<p><b>20</b></p> <p>69 [16] 800 [589] 119 [79]</p> <p>Unionville Ave (Rt 177)</p> <p>47 [150] 139 [247] 33 [244]</p> <p>Northwest Dr</p> <p>35 [34] 182 [106] 79 [114]</p> <p>223 [130] 566 [953] 158 [68]</p>
<p><b>21</b></p> <p>9 [6] 134 [113] 156 [182]</p> <p>New Britain Ave</p> <p>71 [155] 54 [208] 8 [27]</p> <p>Red Oak Hill Rd</p> <p>12 [10] 245 [152] 75 [46]</p> <p>19 [136] 77 [207] 7 [23]</p>	<p><b>22</b></p> <p>49 [47] 171 [131] 0 [2]</p> <p>New Britain Ave</p> <p>0 [9] 70 [120] 19 [8]</p> <p>Meadow Rd</p> <p>64 [80] 145 [101] 111 [68]</p> <p>40 [158] 119 [338] 6 [14]</p>	<p><b>23</b></p> <p>40 [39] 85 [111] 140 [136]</p> <p>New Britain Ave</p> <p>121 [330] 530 [1048] 12 [18]</p> <p>Scott Swamp Rd (Rt 6)</p> <p>36 [42] 845 [670] 36 [34]</p> <p>23 [30] 45 [122] 10 [14]</p>	<p><b>24</b></p> <p>1 [10] 1 [7] 2 [14]</p> <p>Hyde Rd</p> <p>19 [3] 622 [1274] 153 [161]</p> <p>Scott Swamp Rd (Rt 6)</p> <p>10 [2] 1088 [860] 8 [24]</p> <p>3 [13] 6 [0] 51 [238]</p>
<p><b>25</b></p> <p>706 [1093] 107 [172]</p> <p>Scott Swamp Rd (Rt 6)</p> <p>Colt Hwy (Rt 6)</p> <p>946 [780] 199 [333]</p> <p>180 [338] 15 [40]</p>	<p><b>26</b></p> <p>89 [216] 284 [580]</p> <p>Main St (Rt 10)</p> <p>343 [151] 119 [153]</p> <p>83 [216] 406 [399]</p>	<p><b>27</b></p> <p>8 [28] 181 [132]</p> <p>New Britain Ave</p> <p>18 [15] 32 [20]</p> <p>13 [27] 127 [327]</p>	<p><b>28</b></p> <p>10 [28] 241 [223]</p> <p>New Britain Ave</p> <p>16 [16] 40 [18]</p> <p>14 [42] 196 [379]</p>
<p><b>29</b></p> <p>22 [28] 1 [2] 25 [25]</p> <p>Chaffee Ln</p> <p>26 [21] 83 [168] 14 [10]</p> <p>W District Rd</p> <p>31 [25] 103 [68] 0 [3]</p> <p>2 [3] 0 [0] 20 [4]</p>			



**LEGEND**

- Signalized Study Intersection
- Unsignalized Study Intersection
- X [Y] Weekday AM [PM] Peak Hour Vehicle Volume



the opening of the new Monteith Drive bridge, which reduced the congestion typically experienced at the South Main Street (Route 177) bridge. For instance, it is expected that traffic from/to Avon Road and Brickyard Road will utilize the Monteith Drive bridge as a shortcut to New Britain Avenue. The two planned developments (the new Farmington High School and Midpoint) were also added to the base Scenario 2 volumes. The Farmington High School trip assignment was redistributed accordingly to account for the new Monteith Drive bridge. The site-generated traffic volumes assumed for the background projects are included in Appendix D. The resultant Scenario 2 (2050 Build Conditions) peak-hour traffic volumes are shown in **Figures 10a and 10b**.

### 3.3 Intersection Capacity Analysis

Intersection capacity analysis was performed at the study intersections under Scenario 1 (2050 No-Build Conditions) and Scenario 2 (2050 Build Conditions) to evaluate each intersection's ability to process traffic volumes. These evaluations were used to determine possible traffic impacts from the proposed Monteith Drive bridge based on the comparison of no-build versus build traffic operations. The study intersections were evaluated using *Synchro 11 (Trafficware)* traffic analysis software package. **Table 4** summarizes the capacity analysis findings under Future (2050) Conditions. The *Synchro* analysis worksheets are included in Appendix E.

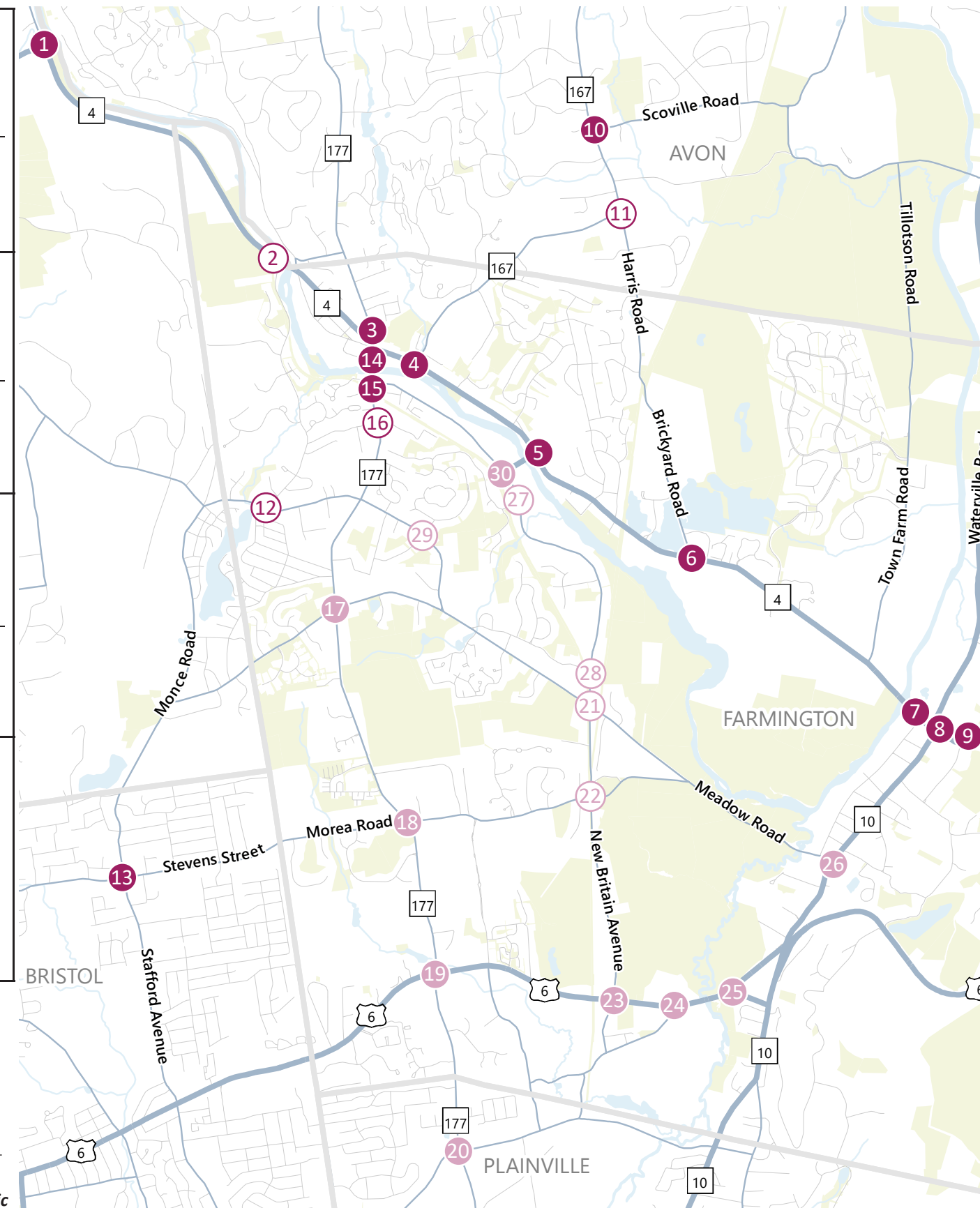
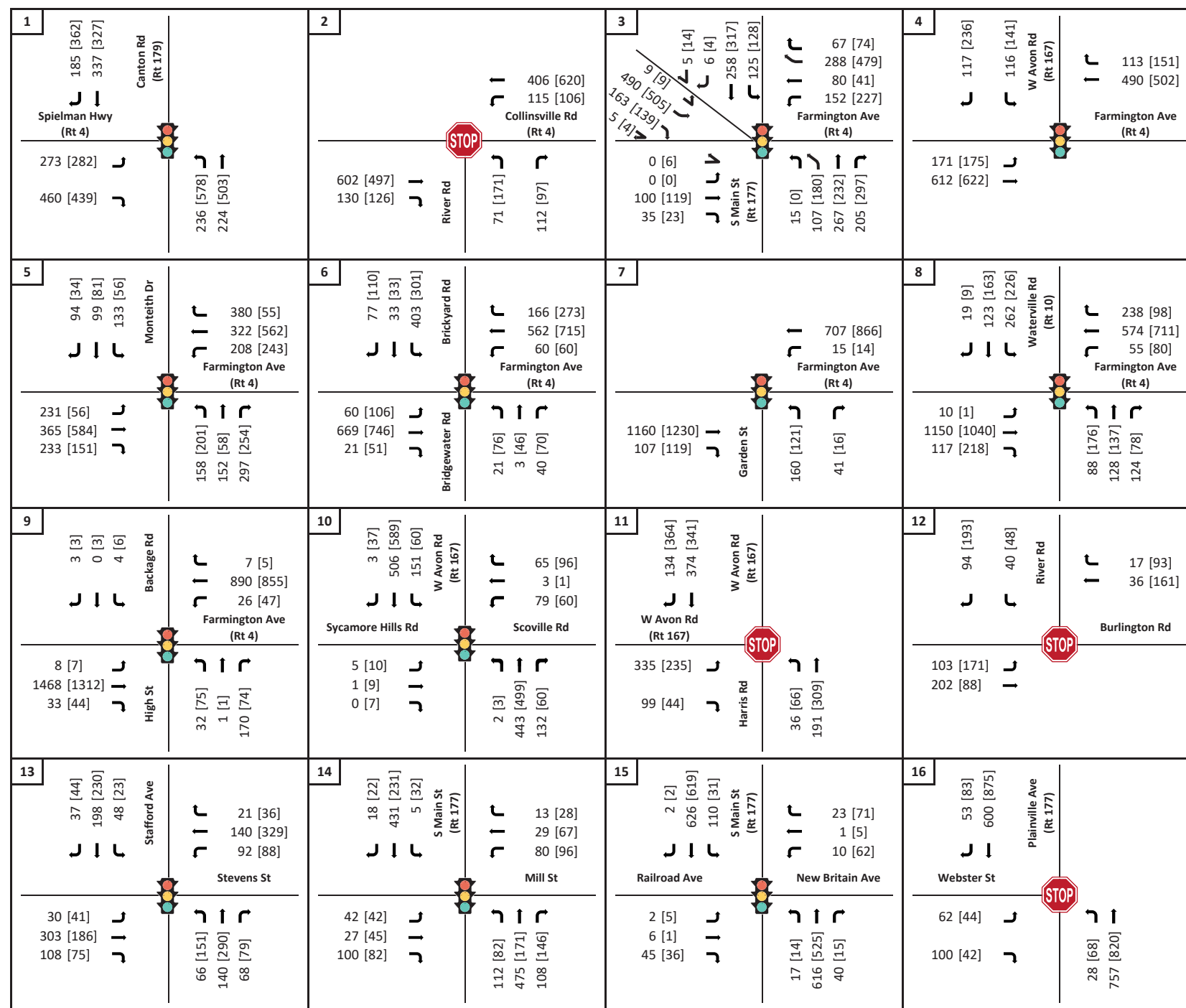
It is important to note that Future (2050) Build (Scenario 2) Conditions intersection capacity and queues analysis for the intersection of Farmington Avenue (Route 4) at Monteith Drive and the new intersection of New Britain Avenue at Monteith Drive with the proposed bridge in place are presented in Chapter 5 as part of the alternatives analysis for the bridge and the two connecting intersections.

**Table 4 Future (2050) Conditions Capacity Analysis Summary**

Intersection/Lane Group	2050 Scenarios 1 & 2 (No-Build And Build Conditions) Level Of Service			
	A.M. Peak Hour		P.M. Peak Hour	
	Scenario 1 (No-Build)	Scenario 2 (Build)	Scenario 1 (No-Build)	Scenario 2 (Build)
<b>Signalized</b>				
<b>1: Canton Rd (RT 179) &amp; Spielman Hwy (RT 4)</b>				
Eastbound Left	D	D	D	D
Eastbound Right	A	A	A	A
Northbound Left/Through	C	C	F	F
Southbound Through/Right	B	B	C	B
<b>Overall</b>	<b>B</b>	<b>B</b>	<b>F</b>	<b>F</b>
<b>3: S Main St (RT 177)/Lovely St (RT 177) &amp; School St/Farmington Ave (RT 4) &amp; Main St (RT 4)</b>				
Eastbound Left/Through/Right	C	C	C	C
Westbound Left/Through	E	E	E	E
Westbound Right	B	B	C	C
Northbound Left	D	D	D	D
Northbound Through	C	C	C	C
Southbound Left	D	D	E	E



Figure 10a - Scenario 2 (2050 Build Conditions) Peak-Hour Traffic Volumes (Intersections 1-16)



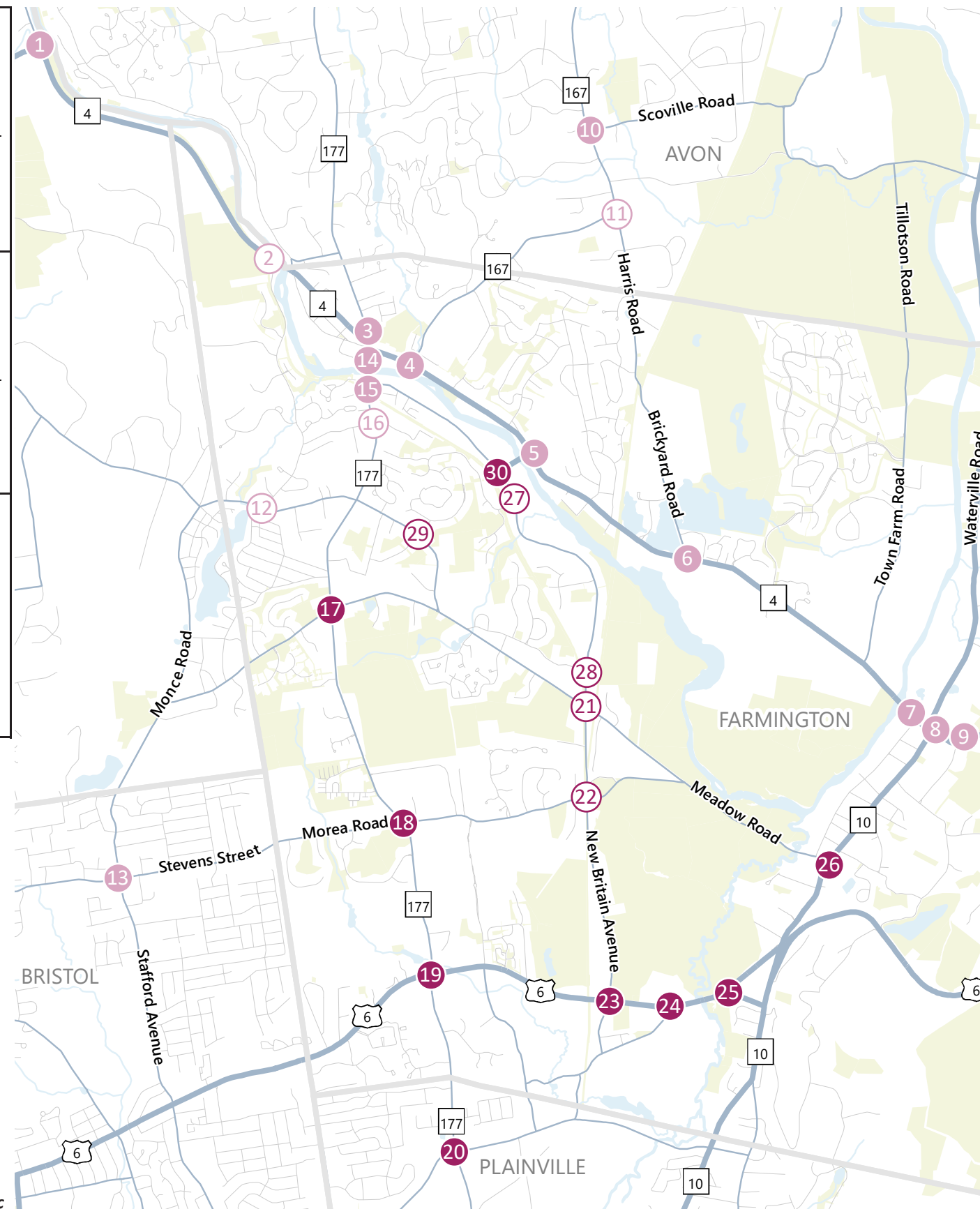
**LEGEND**

- # Signalized Study Intersection
- # Unsignalized Study Intersection
- ← X [Y] Weekday AM [PM] Peak Hour Vehicle Volume

Figure 10b - Scenario 2 (2050 Build Conditions) Peak-Hour Traffic Volumes (Intersections 17-30)



<p><b>17</b></p> <p>90 [181] 720 [614] 45 [38]</p> <p>Plainville Ave (Rt 177)</p> <p>18 [54] 31 [108] 65 [56]</p> <p>Coppermine Rd</p> <p>158 [145] 89 [69] 73 [33]</p> <p>41 [87] 584 [846] 63 [75]</p>	<p><b>18</b></p> <p>24 [48] 887 [628] 91 [71]</p> <p>Morea Rd</p> <p>Plainville Ave (Rt 177)</p> <p>39 [101] 60 [225] 22 [47]</p> <p>Meadow Rd</p> <p>48 [27] 211 [109] 289 [160]</p> <p>114 [326] 564 [1000] 36 [34]</p>	<p><b>19</b></p> <p>71 [144] 897 [594] 256 [194]</p> <p>Plainville Ave (Rt 177)</p> <p>72 [305] 283 [735] 109 [166]</p> <p>Scott Swamp Rd (Rt 6)</p> <p>96 [148] 708 [417] 176 [124]</p> <p>102 [132] 533 [849] 142 [96]</p>	<p><b>20</b></p> <p>71 [17] 831 [600] 118 [86]</p> <p>Unionville Ave (Rt 177)</p> <p>48 [154] 138 [251] 33 [240]</p> <p>Northwest Dr</p> <p>39 [34] 188 [111] 86 [111]</p> <p>222 [130] 576 [961] 152 [70]</p>
<p><b>21</b></p> <p>11 [10] 153 [158] 151 [199]</p> <p>New Britain Ave</p> <p>87 [156] 47 [210] 6 [24]</p> <p>Red Oak Hill Rd</p> <p>22 [13] 237 [133] 85 [52]</p> <p>21 [159] 124 [243] 6 [18]</p>	<p><b>22</b></p> <p>82 [85] 166 [134] 0 [2]</p> <p>New Britain Ave</p> <p>0 [9] 72 [120] 11 [5]</p> <p>Meadow Rd</p> <p>117 [138] 140 [102] 119 [69]</p> <p>45 [166] 131 [337] 4 [8]</p>	<p><b>23</b></p> <p>47 [37] 83 [130] 134 [120]</p> <p>New Britain Ave</p> <p>109 [314] 522 [1044] 10 [22]</p> <p>Scott Swamp Rd (Rt 6)</p> <p>41 [43] 824 [659] 35 [44]</p> <p>37 [32] 66 [126] 13 [14]</p>	<p><b>24</b></p> <p>1 [9] 1 [7] 2 [14]</p> <p>Hyde Rd</p> <p>20 [3] 601 [1244] 146 [168]</p> <p>Scott Swamp Rd (Rt 6)</p> <p>9 [2] 1063 [840] 7 [24]</p> <p>3 [13] 5 [0] 51 [244]</p>
<p><b>25</b></p> <p>701 [1074] 106 [170]</p> <p>Scott Swamp Rd (Rt 6)</p> <p>Colt Hwy (Rt 6)</p> <p>928 [783] 190 [324]</p> <p>176 [327] 15 [40]</p>	<p><b>26</b></p> <p>91 [218] 268 [541]</p> <p>Main St (Rt 10)</p> <p>87 [212] 376 [368]</p> <p>329 [153] 118 [153]</p>	<p><b>27</b></p> <p>13 [45] 293 [209]</p> <p>New Britain Ave</p> <p>21 [43] 205 [518]</p> <p>30 [23] 52 [32]</p>	<p><b>28</b></p> <p>13 [32] 289 [258]</p> <p>New Britain Ave</p> <p>17 [48] 234 [438]</p> <p>20 [18] 47 [21]</p>
<p><b>29</b></p> <p>22 [28] 1 [2] 26 [25]</p> <p>Chaffee Ln</p> <p>27 [21] 83 [171] 14 [11]</p> <p>W District Rd</p> <p>31 [26] 104 [69] 0 [3]</p> <p>2 [3] 0 [0] 20 [5]</p>	<p><b>30</b></p> <p>38 [69] 502 [407]</p> <p>Monteith Dr</p> <p>519 [465] 12 [177]</p> <p>90 [47] 208 [27]</p>		



**LEGEND**

- # Signalized Study Intersection
- # Unsignalized Study Intersection
- ← X [Y] Weekday AM [PM] Peak Hour Vehicle Volume

Intersection/Lane Group	2050 Scenarios 1 & 2 (No-Build And Build Conditions) Level Of Service			
	A.M. Peak Hour		P.M. Peak Hour	
	Scenario 1 (No-Build)	Scenario 2 (Build)	Scenario 1 (No-Build)	Scenario 2 (Build)
Southbound Through	E	E	F	F
Southeastbound Left	E	F	F	F
Southeastbound Right	D	D	D	D
<b>Overall</b>	<b>D</b>	<b>D</b>	<b>E</b>	<b>E</b>
<b>4: Farmington Ave (RT 4) &amp; W Avon Rd (RT 167)</b>				
Eastbound Left	B	B	A	B
Eastbound Through	B	B	A	B
Westbound Through/Right	C	C	B	C
Southbound Left/Right	C	D	C	D
<b>Overall</b>	<b>B</b>	<b>B</b>	<b>B</b>	<b>C</b>
<b>5: Farmington Ave (RT 4) &amp; Monteith Dr</b>				
Eastbound Left	-	*	-	*
Eastbound Through/Right	F	*	A	*
Westbound Left	-	*	-	*
Westbound Through	C	*	A	*
Westbound Right	-	*	-	*
Northbound Left	-	*	-	*
Northbound Through	-	*	-	*
Northbound Right	-	*	-	*
Southbound Left	E	*	E	*
*Scenario 2 LOS is presented in Alternatives Phase of the Study				
Southbound Through/Right	A	D	B	D
<b>Overall</b>	<b>F</b>	<b>C</b>	<b>A</b>	<b>C</b>
<b>6: Bridgewater Rd/Brickyard Rd &amp; Farmington Ave (RT 4)</b>				
Eastbound Left	B	B	C	C
Eastbound Through/Right	D	D	D	D
Westbound Left	B	B	C	C
Westbound Through	C	C	D	D
Westbound Right	A	A	B	B
Northbound Left	C	C	C	C
Northbound Through/Right	C	C	E	E
Southbound Left	F	F	D	D
Southbound Through/Right	C	D	C	D
<b>Overall</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>
<b>7: Garden St &amp; Farmington Ave (RT 4)</b>				
Eastbound Through/Right	B	B	B	B



Intersection/Lane Group	2050 Scenarios 1 & 2 (No-Build And Build Conditions) Level Of Service			
	A.M. Peak Hour		P.M. Peak Hour	
	Scenario 1 (No-Build)	Scenario 2 (Build)	Scenario 1 (No-Build)	Scenario 2 (Build)
Westbound Left	A	A	A	A
Westbound Through	A	A	A	A
Northbound Left/Right	E	E	F	F
<b>Overall</b>	<b>B</b>	<b>B</b>	<b>B</b>	<b>B</b>
<b>8: Main St/Waterville Rd (RT 10) &amp; Farmington Ave (RT 4)</b>				
Eastbound Left	B	B	B	B
Eastbound Through	E	E	D	D
Eastbound Right	C	C	C	C
Westbound Left	C	D	D	D
Westbound Through/Right	F	F	F	F
Northbound Left	E	E	F	F
Northbound Through	F	F	E	E
Northbound Right	E	E	D	D
Southbound Left/Through/Right	D	D	E	E
<b>Overall</b>	<b>F</b>	<b>F</b>	<b>E</b>	<b>E</b>
<b>9: High St/Backage Rd &amp; Farmington Ave (RT 4)</b>				
Eastbound Left	A	A	A	A
Eastbound Through/Right	B	B	B	B
Westbound Left	A	A	A	A
Westbound Through/Right	A	A	B	B
Northbound Left/Through	E	E	E	E
Northbound Right	B	B	B	B
Southbound Left/Through/Right	E	E	E	E
<b>Overall</b>	<b>B</b>	<b>B</b>	<b>B</b>	<b>B</b>
<b>10: W Avon Rd (RT 167) &amp; Sycamore Hills Rd/Scoville Rd</b>				
Eastbound Left/Through/Right	C	C	C	C
Westbound Left/Through/Right	C	D	C	C
Northbound Left/Through/Right	C	C	C	C
Southbound Left/Through/Right	D	D	B	B
<b>Overall</b>	<b>D</b>	<b>D</b>	<b>C</b>	<b>C</b>
<b>13: Stafford Ave &amp; Stevens St</b>				
Eastbound Left/Through/Right	C	C	C	C
Westbound Left/Through/Right	C	C	C	C
Northbound Left/Through/Right	E	E	F	F
Southbound Left/Through/Right	D	D	C	C
<b>Overall</b>	<b>D</b>	<b>D</b>	<b>F</b>	<b>F</b>



Intersection/Lane Group	2050 Scenarios 1 & 2 (No-Build And Build Conditions) Level Of Service			
	A.M. Peak Hour		P.M. Peak Hour	
	Scenario 1 (No-Build)	Scenario 2 (Build)	Scenario 1 (No-Build)	Scenario 2 (Build)
<b>14: S Main St (RT 177) &amp; Mill St</b>				
Eastbound Left/Through	D	D	D	C
Eastbound Right	C	C	C	B
Westbound Left/Through	E	D	D	D
Westbound Right	D	D	C	C
Northbound Left	B	A	A	A
Northbound Through/Right	B	A	A	A
Southbound Left	B	B	B	A
Southbound Through/Right	C	B	C	B
<b>Overall</b>	<b>C</b>	<b>B</b>	<b>B</b>	<b>B</b>
<b>15: S Main St (RT 177) &amp; Railroad Ave/New Britain Ave</b>				
Eastbound Left/Through/Right	D	D	D	C
Westbound Left/Through	D	C	D	D
Westbound Right	C	B	C	B
Northbound Left	B	B	B	B
Northbound Through/Right	C	B	C	B
Southbound Left	C	A	C	A
Southbound Through/Right	A	A	A	A
<b>Overall</b>	<b>B</b>	<b>B</b>	<b>C</b>	<b>B</b>
<b>17: Plainville Ave (RT 177) &amp; Coppermine Rd</b>				
Eastbound Left/Through/Right	E	E	E	E
Westbound Left/Through/Right	C	C	C	D
Northbound Left/Through/Right	C	C	D	E
Southbound Left/Through/Right	D	D	C	C
<b>Overall</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>
<b>18: Plainville Ave (RT 177) &amp; Morea Rd/Meadow Rd</b>				
Eastbound Left/Through/Right	F	F	D	D
Westbound Left/Through/Right	C	C	D	E
Northbound Left	C	C	C	D
Northbound Through/Right	B	C	D	E
Southbound Left	A	A	B	B
Southbound Through/Right	D	D	C	C
<b>Overall</b>	<b>E</b>	<b>E</b>	<b>D</b>	<b>D</b>
<b>19: Plainville Ave (RT 177) &amp; Scott Swamp Rd (US 6)</b>				
Eastbound Left	F	F	F	F
Eastbound Through	F	F	E	E



Intersection/Lane Group	2050 Scenarios 1 & 2 (No-Build And Build Conditions) Level Of Service			
	A.M. Peak Hour		P.M. Peak Hour	
	Scenario 1 (No-Build)	Scenario 2 (Build)	Scenario 1 (No-Build)	Scenario 2 (Build)
Eastbound Right	B	B	B	A
Westbound Left	F	F	F	F
Westbound Through/Right	C	C	E	E
Northbound Left	D	D	C	C
Northbound Through	F	F	F	F
Northbound Right	A	A	A	A
Southbound Left	F	F	F	F
Southbound Through/Right	D	D	D	D
<b>Overall</b>	<b>F</b>	<b>F</b>	<b>F</b>	<b>F</b>
<b>20: Unionville Ave (RT 177) &amp; Northwest Dr</b>				
Eastbound Left	B	B	C	C
Eastbound Through/Right	D	D	D	D
Westbound Left	B	B	C	C
Westbound Through/Right	C	C	D	D
Northbound Left	D	D	C	C
Northbound Through/Right	C	C	E	E
Southbound Left	B	B	C	C
Southbound Through/Right	C	C	D	D
<b>Overall</b>	<b>C</b>	<b>C</b>	<b>D</b>	<b>D</b>
<b>23: New Britain Ave &amp; Scott Swamp Rd (US 6)</b>				
Eastbound Left	D	D	D	D
Eastbound Through/Right	B	B	B	B
Westbound Left	C	C	D	D
Westbound Through	B	B	C	C
Westbound Right	A	A	A	A
Northbound Left	D	D	C	C
Northbound Through/Right	D	D	D	D
Southbound Left	C	C	C	C
Southbound Through/Right	D	D	D	D
<b>Overall</b>	<b>B</b>	<b>B</b>	<b>C</b>	<b>C</b>
<b>24: Hyde Rd &amp; Scott Swamp Rd (US 6)</b>				
Eastbound Left	D	D	D	D
Eastbound Through/Right	A	A	A	A
Westbound Left	D	D	D	D
Westbound Through/Right	A	A	A	A
Northbound Left/Through	C	C	C	C



Intersection/Lane Group	2050 Scenarios 1 & 2 (No-Build And Build Conditions) Level Of Service			
	A.M. Peak Hour		P.M. Peak Hour	
	Scenario 1 (No-Build)	Scenario 2 (Build)	Scenario 1 (No-Build)	Scenario 2 (Build)
Northbound Right	A	A	B	B
Southbound Left/Through	C	C	D	D
Southbound Right	A	A	A	A
<b>Overall</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
<b>25: Scott Swamp Rd (RT 552) &amp; Scott Swamp Rd (US 6)/Colt Hwy (US 6)</b>				
Eastbound Through	A	A	B	B
Eastbound Right	A	A	A	A
Westbound Left	D	D	E	E
Westbound Through	A	A	A	A
Northbound Left/Right	D	D	D	D
<b>Overall</b>	<b>B</b>	<b>B</b>	<b>B</b>	<b>B</b>
<b>26: Main St (RT 10) &amp; Meadow Rd</b>				
Eastbound Left/Right	C	C	D	D
Northbound Left/Through	F	E	F	F
Southbound Left/Right	D	D	F	E
<b>Overall</b>	<b>E</b>	<b>D</b>	<b>F</b>	<b>F</b>
<b>30: New Britain Ave &amp; Monteith Dr</b>				
Eastbound Left	-	*	-	*
Eastbound Through	-	*	-	*
Westbound Through	-	*	-	*
Westbound Right	-	*	-	*
Southbound Left	-	*	-	*
Southbound Right	-	*	-	*
<b>Overall</b>	<b>-</b>	<b>*</b>	<b>-</b>	<b>*</b>
<b>Unsignalized</b>				
<b>2: River Road &amp; Collinsville Rd (RT 4)</b>				
Northbound Left	F	F	F	F
Northbound Right	C	C	C	B
Westbound Left	B	A	A	A
<b>11: Harris Rd/W Avon Rd (RT 167) &amp; W Avon Rd (RT 167)</b>				
Eastbound Left/Right	C	D	C	C
Northbound Left/Through	B	B	C	C
Southbound Through/Right	D	E	F	F
<b>Overall</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>



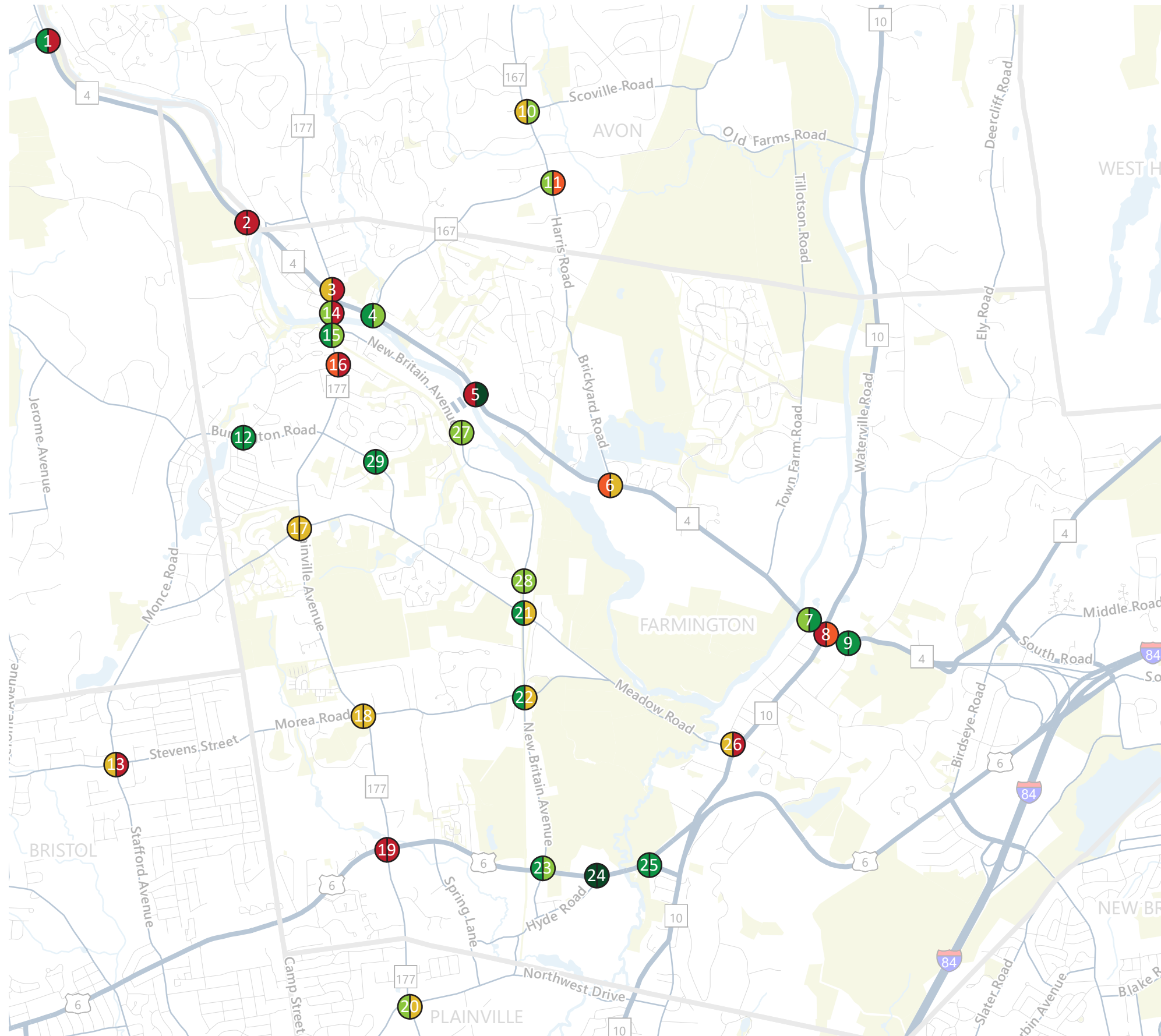
Intersection/Lane Group	2050 Scenarios 1 & 2 (No-Build And Build Conditions) Level Of Service			
	A.M. Peak Hour		P.M. Peak Hour	
	Scenario 1 (No-Build)	Scenario 2 (Build)	Scenario 1 (No-Build)	Scenario 2 (Build)
<b>12: Burlington Rd &amp; River Rd</b>				
Eastbound Left	A	A	A	A
Southbound Left/Right	B	B	B	B
<b>16: S Main St (RT 177) &amp; Webster St</b>				
Northbound Left	A	A	B	B
Eastbound Left/Right	E	E	F	F
<b>21: New Britain Ave &amp; Red Oak Hill Rd</b>				
Eastbound Left/Through/Right	B	C	C	C
Westbound Left/Through/Right	B	B	E	F
Northbound Left/Through/Right	B	B	E	F
Southbound Left/Through/Right	B	C	D	F
<b>Overall</b>	<b>B</b>	<b>B</b>	<b>D</b>	<b>F</b>
<b>22: New Britain Ave &amp; Meadow Rd</b>				
Eastbound Left/Through/Right	C	C	C	C
Westbound Left/Through/Right	B	B	B	B
Northbound Left/Through/Right	B	B	B	F
Southbound Left/Through/Right	B	C	B	C
<b>Overall</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>D</b>
<b>27: New Britain Ave &amp; Oakridge</b>				
Northbound Left	A	A	A	A
Eastbound Left/Right	B	B	B	B
<b>28: New Britain Ave &amp; Coppermine Rd</b>				
Northbound Left	A	A	A	A
Eastbound Left/Right	B	B	B	B
<b>29: W District Rd &amp; Whispering Rod Rd/Chaffee Ln</b>				
Eastbound Left/Through/Right	A	A	A	A
Westbound Left/Through/Right	A	A	A	A
Northbound Left/Through/Right	A	A	A	A
Southbound Left/Through/Right	A	A	A	A
<b>Overall</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>

\*Scenario 2 LOS for Intersection 30 (Monteith Drive at New Britain Avenue) to be determined in the Alternatives Phase of the Study  
 Note: Total delay associated with LOS are presented in Appendix E (Pages 205-553)

**Figure 11** displays the capacity analysis findings under Scenario 1 (2050 No-Build Conditions), and **Figure 12** displays the capacity analysis findings under Scenario 2 (2050 Build Conditions). **Figure 13** displays the general operational changes within the study area that are expected to occur with the addition of the proposed Monteith Drive bridge.



Figure 11 - Scenario 1 (2050 No-Build Conditions) Overall LOS Findings



INTERSECTION/LANE GROUP	OVERALL LEVEL OF SERVICE	
	A.M.	P.M.
<b>SIGNALIZED</b>		
1: Canton Rd (RT 179) & Spielman Hwy (RT 4)	B	F
3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)	D	E
4: Farmington Ave (RT 4) & W Avon Rd (RT 167)	B	B
5: Farmington Ave (RT 4) & Monteith Dr	F	A
6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)	D	D
7: Garden St & Farmington Ave (RT 4)	B	B
8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4)	F	E
9: High St/Backage Rd & Farmington Ave (RT 4)	B	B
10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd	D	C
13: Stafford Ave & Stevens St	D	F
14: S Main St (RT 177) & Mill St	C	B
15: S Main St (RT 177) & Railroad Ave/New Britain Ave	B	C
17: Plainville Ave (RT 177) & Coopermine Rd	D	D
18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd	E	D
19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)	F	F
20: Unionville Ave (RT 177) & Northwest Dr	C	D
23: New Britain Ave & Scott Swamp Rd (US 6)	B	C
24: Hyde Rd & Scott Swamp Rd (US 6)	A	A
25: Scott Swamp Rd (RT 552) & Scott Swamp Rd (US 6)/Colt Hwy (US 6)	B	B
26: Main St (RT 10) & Meadow Rd	E	F
<b>UNSIGNALIZED</b>		
2: River Road & Collinsville Rd (RT 4)	F	F
11: Harris Rd/W Avon Rd (RT 167) & W Avon Rd (RT 167)	C	E
12: Burlington Rd & River Rd	B	B
16: S Main St (RT 177) & Webster St	E	F
21: New Britain Ave & Red Oak Hill Rd	B	D
22: New Britain Ave & Meadow Rd	B	D
27: New Britain Ave & Oakridge	B	B
28: New Britain Ave & Coppermine Rd	B	B
29: W District Rd & Whispering Rod Rd/Chaffee Ln	A	A

Notes: LOS calculations were performed using Synchro 11.

**LEGEND**

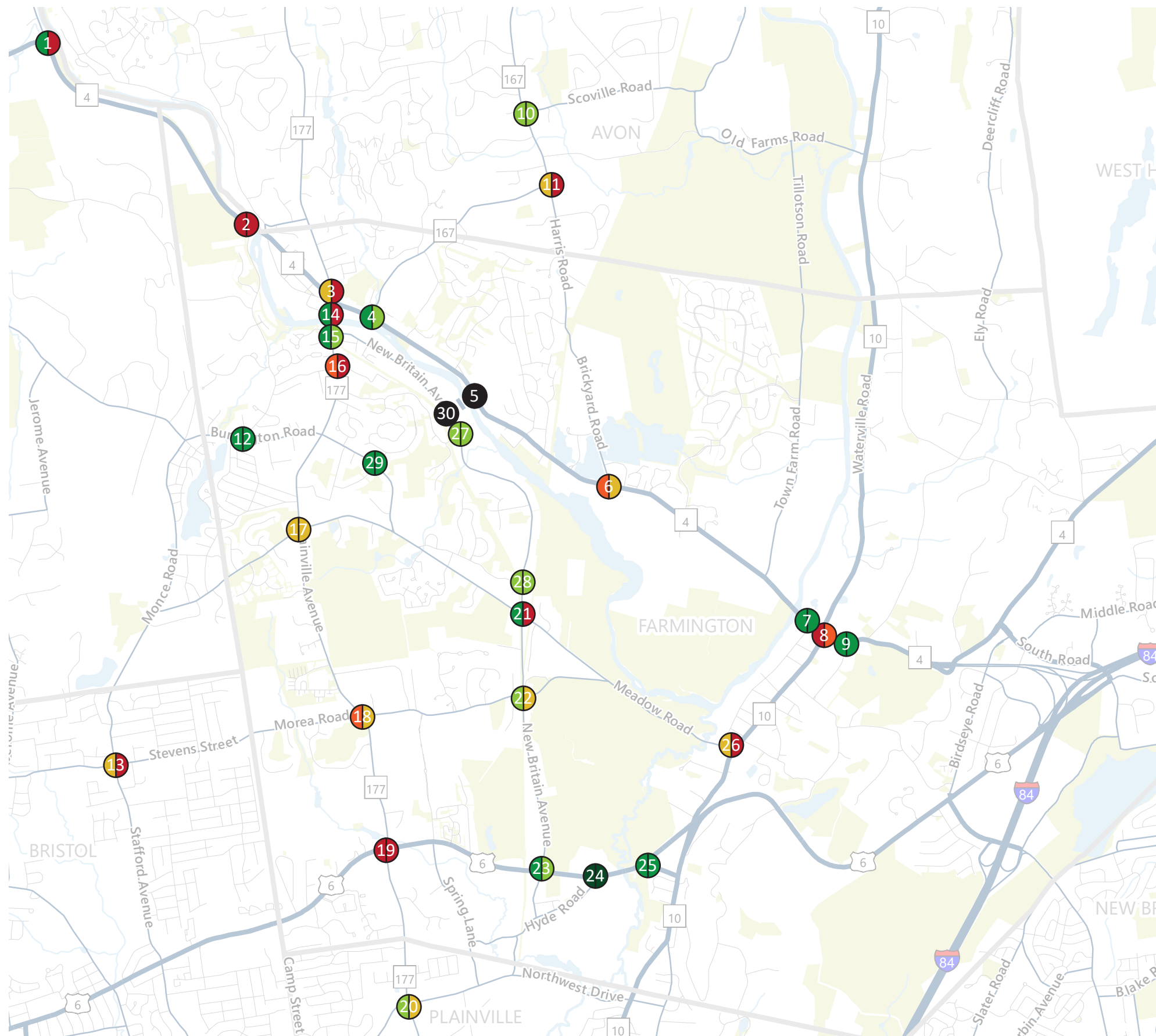
⊕ A.M. | P.M. Peak-Hour Overall LOS

**Level of Service (LOS)**

- A - Primarily free-flow operation
- B - Reasonably unimpeded operation
- C - Stable operation
- D - Less stable condition
- E - Unstable operation and significant delay
- F - Flow at extremely low speed



Figure 12 - Scenario 2 (2050 Build Conditions) Overall LOS Findings



INTERSECTION/LANE GROUP	OVERALL LEVEL OF SERVICE	
	A.M.	P.M.
<b>SIGNALIZED</b>		
1: Canton Rd (RT 179) & Spielman Hwy (RT 4)	A	A
3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)	D	E
4: Farmington Ave (RT 4) & W Avon Rd (RT 167)	B	C
5: Farmington Ave (RT 4) & Monteith Dr	*	*
6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)	D	D
7: Garden St & Farmington Ave (RT 4)	B	B
8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4)	F	E
9: High St/Backage Rd & Farmington Ave (RT 4)	B	B
10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd	D	C
13: Stafford Ave & Stevens St	D	F
14: S Main St (RT 177) & Mill St	B	B
15: S Main St (RT 177) & Railroad Ave/New Britain Ave	B	B
17: Plainville Ave (RT 177) & Coopermine Rd	D	D
18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd	E	D
19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)	F	F
20: Unionville Ave (RT 177) & Northwest Dr	C	D
23: New Britain Ave & Scott Swamp Rd (US 6)	B	C
24: Hyde Rd & Scott Swamp Rd (US 6)	A	A
25: Scott Swamp Rd (RT 552) & Scott Swamp Rd (US 6)/Colt Hwy (US 6)	B	B
26: Main St (RT 10) & Meadow Rd	D	F
30: New Britain Ave & Monteith Dr	*	*
<b>UNSIGNALIZED</b>		
2: River Road & Collinsville Rd (RT 4)	A	A
11: Harris Rd/W Avon Rd (RT 167) & W Avon Rd (RT 167)	D	F
12: Burlington Rd & River Rd	B	B
16: S Main St (RT 177) & Webster St	E	F
21: New Britain Ave & Red Oak Hill Rd	B	F
22: New Britain Ave & Meadow Rd	C	D
27: New Britain Ave & Oakridge	B	B
28: New Britain Ave & Coppermine Rd	B	B
29: W District Rd & Whispering Rod Rd/Chaffee Ln	A	A

Notes: LOS calculations were performed using Synchro 11.  
 \*Scenario 2 LOS for Intersections 5 & 27 to be determined in the Alternatives Phase of the Study

**LEGEND**

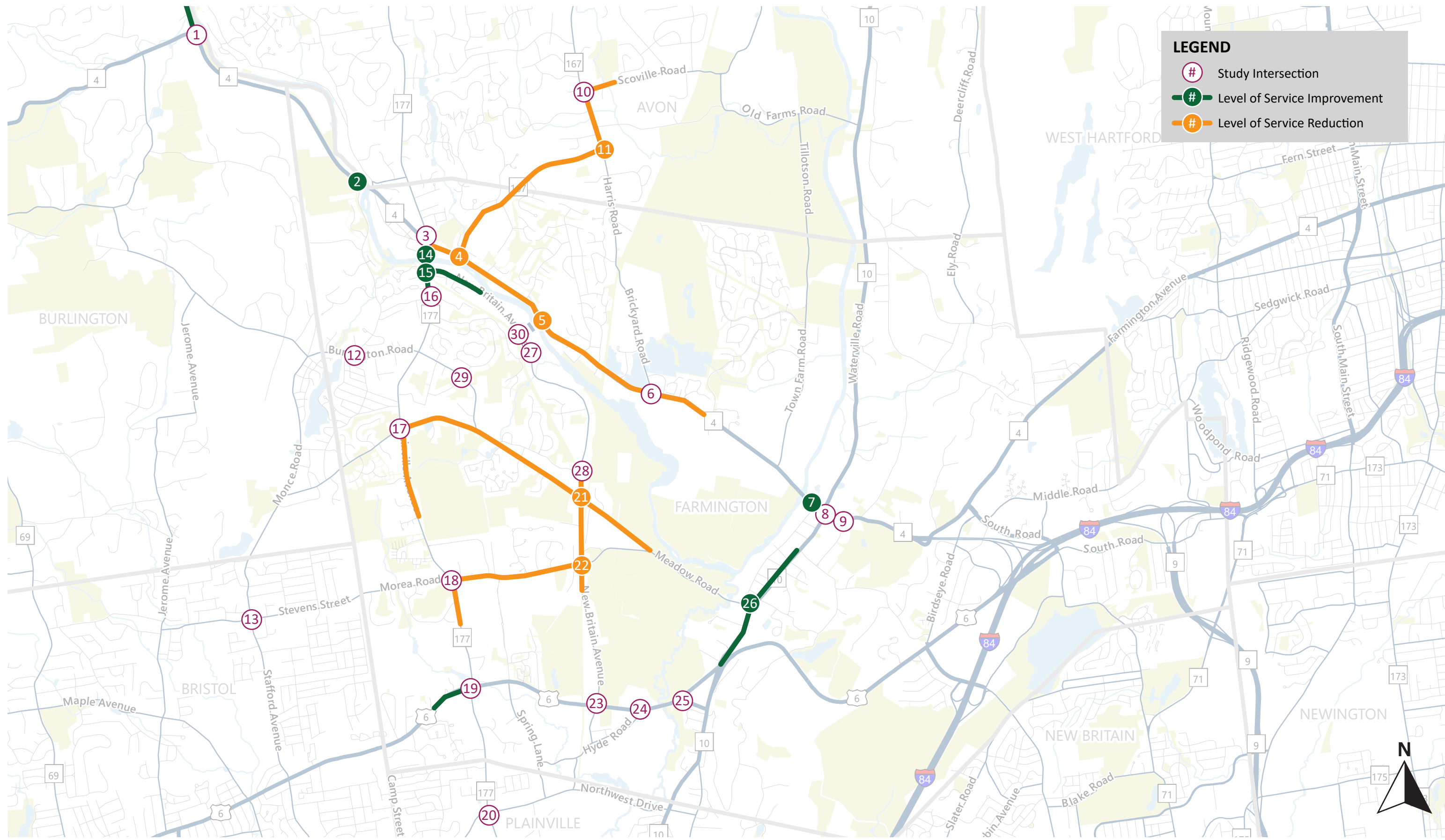
⊕ A.M. | P.M. Peak-Hour Overall LOS

**Level of Service (LOS)**

- A - Primarily free-flow operation
- B - Reasonably unimpeded operation
- C - Stable operation
- D - Less stable condition
- E - Unstable operation and significant delay
- F - Flow at extremely low speed



Figure 13 - Future (2050) Conditions Operational Changes with the Proposed Monteith Drive Bridge (Comparison of Scenarios 1 & 2)



As shown in the figures, the operations at the study intersections along Route 4 west of Route 177 (Canton Road [Route 179] at Spielman Highway [Route 4] and River Road at Collinsville Road [Route 4]) are expected to improve with the proposed Monteith Drive bridge. Additionally, the operations at the study intersections near Route 10 (Garden Street at Farmington Avenue [Route 4], Main Street/Waterville Road [Route 10] at Farmington Avenue [Route 4], and High Street/Backage Road at Farmington Avenue [Route 4]) are expected to improve with the proposed Monteith Drive bridge.

Alternatively, the operations at the study intersections along Brickyard Road (Harris Road at West Avon Road [Route 167] and Bridgewater Road/Brickyard Road at Farmington Avenue [Route 4]) are expected to reduce with the proposed Monteith Drive bridge. The operations at the study intersections along New Britain Avenue, Meadow Road, and Morea Road (Plainville Avenue [Route 177] at Coppermine Road, Plainville Avenue [Route 177] at Morea Road/Meadow Road, New Britain Avenue at Red Oak Hill Road, and New Britain Avenue at Meadow Road) are also expected to reduce with the proposed Monteith Drive bridge.

As shown in the table, the following intersections are expected to operate at an unacceptable level of service (LOS F) for some movements under Future (2050) Conditions during the a.m. and p.m. peak hours and will therefore require some mitigation.

### 3.3.1 Signalized Intersections

- **Intersection #1:** Canton Road (Route 179) at Spielman Highway (Route 4) is expected to operate at LOS F at the northbound left/through movements and overall under Scenario 1 (2050 No-Build Conditions) and expected to continue to operate at LOS F under Scenario 2 (2050 Build Conditions) during the p.m. peak hour. The intersection is expected to operate at acceptable conditions (LOS A to LOS D) during the a.m. peak hour under Scenarios 1 and 2.
- **Intersection #3:** South Main Street (Route 177) at Farmington Avenue (Route 4) and Main Street (Route 4) is expected to operate at LOS F at the southeastbound left movement under Scenario 1 (2050 No-Build Conditions) and expected to continue to operate at LOS F under Scenario 2 (2050 Build Conditions) during the a.m. peak hour. However, the intersection is expected to operate at acceptable conditions (LOS D) overall during the a.m. peak hour under Scenarios 1 and 2. The westbound left/through movements are expected to operate at LOS E under Scenario 1 and 2.. Additionally, the intersection is expected to operate at LOS F at the southbound through, and southeastbound left movements under Scenarios 1 and 2 (2050 No-Build Conditions)..
- **Intersection #5:** Farmington Avenue (Route 4) at Monteith Drive is expected to operate at LOS F at the eastbound through/left movements and overall LOS F under Scenario 1 (2050 No-Build Conditions) during the a.m. peak hour. It should be noted that the LOS for Scenario 2 (2050 Build Conditions) will be determined after the alternative intersection layouts are developed.
- **Intersection #6:** Bridgewater Road/Brickyard Road at Farmington Avenue (Route 4) is expected to operate at LOS F at the southbound left movement under Scenario 1 (2050 No-Build Conditions) and is expected to continue to operate at LOS F under Scenario 2 (2050 Build Conditions) during the a.m. peak hour. However, the intersection is expected to operate at acceptable conditions overall during both peak hours under Scenarios 1 and 2.
- **Intersection #7:** Garden Street at Farmington Avenue (Route 4) is expected to operate at LOS F at the northbound left/right movements under Scenario 1 (2050 No-Build



Conditions) and is expected to continue to operate at LOS F under Scenario 2 (2050 Build Conditions) during the p.m. peak hour. However, the intersection is expected to operate at acceptable conditions overall during both peak hours under Scenarios 1 and 2.

- **Intersection #8:** Main Street/Waterville Road (Route 10) at Farmington Avenue (Route 4) is expected to operate at LOS F at the westbound through/right movements and overall under Scenario 1 (2050 No-Build Conditions) and is expected to continue to operate at LOS F under Scenario 2 (2050 Build Conditions) during the a.m. peak hour. The eastbound through movement is expected to operate at LOS F under Scenario 1 but is expected to improve to LOS E under Scenario 2 during the a.m. peak hour. Additionally, the intersection is expected to operate at LOS F at the westbound through/right and northbound left movements under Scenario 1 and is expected to continue to operate at LOS F under Scenario 2 during the p.m. peak hour. However, the intersection is expected to operate at acceptable conditions (LOS E) overall during the p.m. peak hour under Scenarios 1 and 2.
- **Intersection #13:** Stafford Avenue at Stevens Street is expected to operate at LOS F at the northbound left/through/right movements and overall under Scenario 1 (2050 No-Build Conditions) and is expected to continue to operate at LOS F under Scenario 2 (2050 Build Conditions) during the p.m. peak hour. The intersection is expected to operate at acceptable conditions during the a.m. peak hour under Scenarios 1 and 2.
- **Intersection #14:** South Main Street (Route 177) at Stevens Street is expected to operate at LOS F at the eastbound left/through and westbound left/through movements and overall under Scenario 1 (2050 No-Build Conditions) and is expected to continue to operate at LOS F under Scenario 2 (2050 Build Conditions) during the p.m. peak hour. The intersection is expected to operate at acceptable conditions during the a.m. peak hour under Scenarios 1 and 2.
- **Intersection #18:** Plainville Avenue (Route 177) at Morea Road/Meadow Road is expected to operate at LOS F at the eastbound left/through/right movements under Scenario 1 (2050 No-Build Conditions) and is expected to continue to operate at LOS F under Scenario 2 (2050 Build Conditions) during the a.m. peak hour. However, the intersection is expected to operate at acceptable conditions overall during both peak hours under Scenarios 1 and 2.
- **Intersection #19:** Plainville Avenue (Route 177) at Scott Swamp Road (US Route 6) is expected to operate at LOS F at the eastbound left, westbound left, northbound through, and southbound left movements and overall under Scenario 1 (2050 No-Build Conditions) and is expected to continue to operate at LOS F under Scenario 2 (2050 Build Conditions) during both peak hours. The eastbound through movement is also expected to operate at LOS F under Scenario 1 and is expected to continue to operate at LOS F under Scenario 2 during the a.m. peak hour.
- **Intersection #26:** Main Street (Route 10) at Meadow Road is expected to operate at LOS F at the northbound left/through movements and overall under Scenario 1 (2050 No-Build Conditions) and is expected to continue to operate at LOS F under Scenario 2 (2050 Build Conditions) during the p.m. peak hour. The southbound left/right movements are expected to operate at LOS F under Scenario 1 but is expected to improve to LOS E under Scenario 2 during the p.m. peak hour. The intersection is expected to operate at acceptable conditions during the a.m. peak hour under Scenarios 1 and 2.



### 3.3.2 Stop-Controlled Intersections

- **Intersection #2:** River Road and Collinsville Road (Route 4) is expected to operate at LOS F at the northbound left movement under Scenario 1 (2050 No-Build Conditions) and is expected to continue to operate at LOS F under Scenario 2 (2050 Build Conditions) during both peak hours.
- **Intersection #11:** Harris Road/West Avon Road (Route 167) at West Avon Road (Route 167) is expected to operate at LOS F at the southbound through/right movements under Scenario 1 (2050 No-Build Conditions) and is expected to continue to operate at LOS F under Scenario 2 (2050 Build Conditions) during the p.m. peak hour. The intersection overall is expected to operate at LOS E under Scenario 1 but is expected to degrade to LOS F under Scenario 2 during the p.m. peak hour. The intersection is expected to operate at acceptable conditions during the a.m. peak hour under Scenarios 1 and 2.
- **Intersection #16:** South Main Street (Route 177) at Webster Street is expected to operate at LOS F at the eastbound left/right movements under Scenario 1 (2050 No-Build Conditions) and is expected to continue to operate at LOS F under Scenario 2 (2050 Build Conditions) during the p.m. peak hour.
- **Intersection #21:** New Britain Avenue at Red Oak Hill Road is expected to operate at acceptable conditions (LOS C to LOS E) under Scenario 1 (2050 No-Build Conditions) but is expected to degrade to LOS F at the westbound left/through/right, northbound left/through/right, and southbound left/through/right movements and overall under Scenario 2 (2050 Build Conditions) during the p.m. peak hour. The intersection is expected to operate at acceptable conditions during the a.m. peak hour under Scenarios 1 and 2.
- **Intersection #22:** New Britain Avenue at Meadow Road is expected to operate at LOS B at the northbound left/through/movements under Scenario 1 (2050 No-Build Conditions) but is expected to degrade to LOS F under Scenario 2 (2050 Build Conditions) during the p.m. peak hour. However, the intersection is expected to operate at acceptable conditions overall during both peak hours under Scenarios 1 and 2.

### 3.4 Intersection Queue Analysis

The queues at the study intersections were also evaluated under Future (2050) Conditions using *Synchro 11 (Trafficware)* traffic analysis software package. For analysis, the average and 95<sup>th</sup> percentile queues are recorded. The queue analysis findings under Future (2050) Conditions and *Synchro* analysis worksheets are included in Appendix E.

### 3.5 Traffic Routing Analysis

With the construction of the proposed Monteith Drive bridge, an issue that was raised was the potential for traffic to cut through the neighborhoods of Oakridge to get to the new bridge. As part of this study, a travel routing time analysis was conducted to evaluate the potential for traffic cutting through the residential neighborhoods in proximity to the bridge. The Origin and Destination (O-D) pairs identified for the routing analysis were as follows:

- Intersection of Route 177 (Plainville Avenue) at Coppermine Road to/from the new bridge location



- Intersection of Route 177 (Plainville Avenue) at West District Road to/from the new bridge location
- Intersection of Red Oak Hill Road at New Britain Avenue to/from the new bridge location

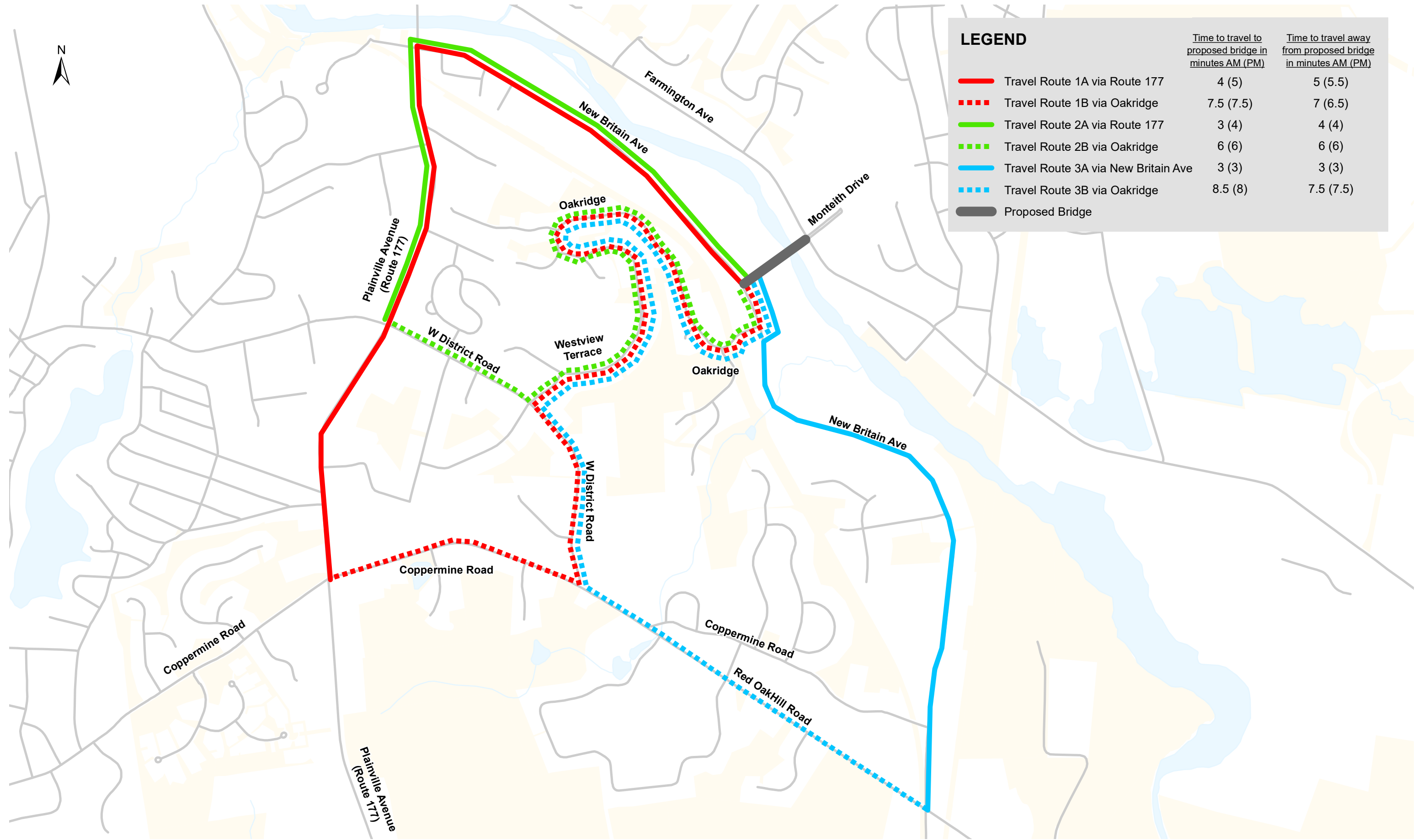
For each of the O-D pairs, two travel route options were identified: one route via Route 177 and New Britain Avenue and the second route via the Oakridge neighborhood. Figure 14 shows the six travel routes that were used for the travel time runs. Travel time runs were conducted on a typical weekday morning peak period on February 2, 2023, as well as during the afternoon off peak period on February 9, 2023, from 7:00 a.m. to 9:00 a.m. and 2:00 p.m. to 3:00 p.m., respectively. The results of the travel time runs are presented in Table 5.

**Table 5 Traffic Routing Analysis**

Start/End Intersection	Via	7:00 - 8:00 A.M.		2:00 - 3:00 P.M.	
		Time to travel to proposed bridge (minutes)	Time to travel away from proposed bridge (minutes)	Time to travel to proposed bridge (minutes)	Time to travel away from proposed bridge (minutes)
Plainville Avenue (Route 177) at Coppermine Road	Plainville Avenue and New Britain Avenue	4	5	5	5.5
	Coppermine Road and Oakridge	7.5	6	7.5	6.5
Plainville Avenue (Route 177) at West District Road	Plainville Avenue and New Britain Avenue	3	4	4	4
	West District Road and Oakridge	6	6	6	6
Red Oak Hill Road at New Britain Avenue	New Britain Avenue	3	3	3	3
	Red Oak Hill Road and Oakridge	8.5	7.5	8	7.5

It can be observed from Table 5 that travel times to and from the bridge via the Oakridge neighborhood were significantly longer in comparison to traveling via Route 177 and New Britain Avenue during both the morning and afternoon periods. The travel time through Oakridge was found to range from 1 minute to 5.5 minutes longer. Based on the travel times runs, the Oakridge neighborhood does not appear to be a viable cut through route to and from the proposed Monteith Drive bridge.





## 4.0 Potential Future Conditions

To evaluate the future local and regional traffic impacts in the event the existing Route 177 bridge was out of service due to a major flooding event or a major bridge reconstruction project, intersection capacity analysis was performed at the 26 study intersections under potential future (2050) conditions for the following scenarios:

**Scenario 3 – 2050 No-Build with Route 177 Bridge Out** – Future conditions without the proposed Monteith Drive bridge connection and with the existing Route 177 bridge out of service

**Scenario 4 – 2050 Build with Route 177 Bridge Out** – Future conditions with a proposed Monteith Drive bridge in place and with the existing Route 177 bridge out of service

### 4.1 Scenario 3 – 2050 No-Build with Route 177 Bridge Out

Scenario 3 is reflective of potential future (2050) conditions without the proposed new bridge crossing and with the Route 177 bridge out of service. This scenario evaluates traffic patterns in the study area, with neither of these two bridges in operation.

The base Scenario 3 (2050 No-Build with Route 177 Bridge Out Conditions) traffic volumes were developed by CRCOG using its TDM and the existing peak-hour traffic volumes. The two planned developments (the new Farmington High School and Midpoint) were also added to the base Scenario 3 volumes. The resultant Scenario 3 (2050 No-Build with Route 177 Bridge Out Conditions) peak-hour traffic volumes are included in Appendix F.

Due to the nature of the roadway network in the study area, drivers will have limited options when detouring under Scenario 3 (2050 No-Build with Route 177 Bridge Out Conditions). The nearest detour option on the northwest side of Route 4 is River Road, approximately 1 mile away, which connects Route 4 back to Route 177 via Webster Street and Burlington Road to the south. The nearest detour option on the southeast side of Route 4 is Garden Street or Route 10, approximately 4 miles away, which connects Route 4 back to Route 177 via Meadow Road. Because of the limited detour options across the Farmington River within the study area, it is likely that a large amount of traffic was detoured out of the study area in the Scenario 3 TDM.

Intersection capacity analysis and queue analysis was performed at the study intersections under Scenario 3 (2050 No-Build with Route 177 Bridge Out Conditions) to evaluate each intersection's ability to process traffic volumes under this potential future condition. The study intersections were evaluated using *Synchro 11 (Trafficware)* traffic analysis software package. The summary tables and *Synchro* analysis worksheets are included in Appendix F.

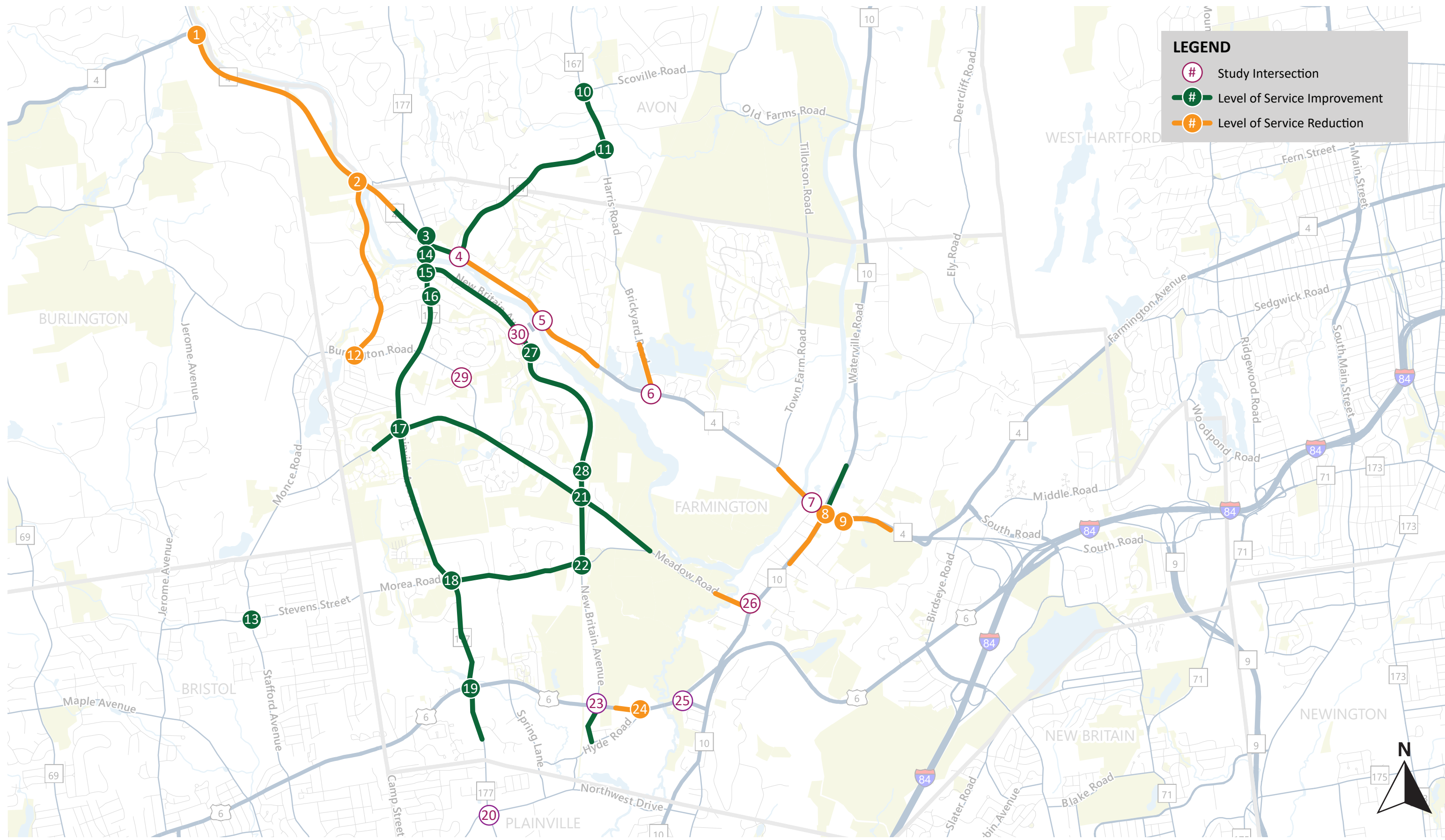
Based on the intersection capacity analysis results of the 26 intersections, overall LOS at five study intersections is expected to deteriorate, overall LOS at ten study intersections is expected to improve, and overall LOS at 11 study intersections is expected to stay the same under Scenario 3 (2050 No-Build with Route 177 Bridge Out Conditions) compared to Scenario 1 (2050 No-Build Conditions) under one or more peak hours.

**Figure 15** displays the general operational changes within the study area that are expected to occur if the Route 177 bridge is closed under future no-build conditions.

In general, the operations at the study intersections along River Road (River Road at Collinsville Road [Route 4] and Burlington Road at River Road) are expected to deteriorate with the closure of the Route 177 bridge compared to Scenario 1 (2050 No-Build Conditions). The operations at the study intersections along Route 4 east of Route 167 and along Route 10 (Bridgewater



Figure 15 - Future (2050) No-Build Conditions Operational Changes with Route 177 Bridge Out (Comparison of Scenarios 1 & 3)



Road/Brickyard Road at Farmington Avenue [Route 4], Garden Street at Farmington Avenue [Route 4], Main Street/Waterville Road [Route 10] at Farmington Avenue [Route 4], High Street/Backage Road at Farmington Avenue [Route 4], and Main Street [Route 10] at Meadow Road) are also expected to deteriorate.

Alternatively, the operations at the study intersections along Route 177 (South Main Street [Route 177] at Mill Street, South Main Street [Route 177] at Railroad Avenue/New Britain Avenue, South Main Street [Route 177] at Webster Street, Plainville Avenue [Route 177] at Coppermine Road, Plainville Avenue [Route 177] at Morea Road/Meadow Road, and Plainville Avenue [Route 177] at Scott Swamp Road [US Route 6]) are expected to improve with the closure of the Route 177 bridge compared to Scenario 1 (2050 No-Build Conditions).

Additionally, the operations at the study intersections along Route 167 and Brickyard Road (West Avon Road [Route 167] at Sycamore Hills Road/Scoville Road, Harris Road at West Avon Road [Route 167], and Farmington Avenue [Route 4] at West Avon Road [Route 167]) and the operations at the study intersections along New Britain Avenue (New Britain Avenue at Red Oak Hill Road and New Britain Avenue at Meadow Road) are expected to improve with the closure of the Route 177 bridge compared to Scenario 1 (2050 No-Build Conditions).

## 4.2 Scenario 4 – 2050 Build with Route 177 Bridge Out

Scenario 4 is reflective of potential future (2050) conditions once the proposed new bridge crossing is built and operational but the Route 177 bridge is out of service. This scenario evaluates traffic patterns in the study area with one bridge in operation, the Monteith Drive bridge.

The base Scenario 4 (2050 Build with Route 177 Bridge Out Conditions) traffic volumes were developed by CRCOG using its TDM and the existing peak-hour traffic volumes. The two planned developments (the new Farmington High School and Midpoint) were also added to the base Scenario 4 volumes. The resultant Scenario 4 (2050 Build with Route 177 Bridge Out Conditions) peak-hour traffic volumes are included in Appendix F.

With the location of Monteith Drive bridge approximately 1 mile east of the closed Route 177 bridge, it is expected that Monteith Drive would be the preferred detour option for traffic from/to Avon Road, Brickyard Road, and southeast of Farmington Avenue. For the traffic to/from Route 177 and northwest of Route 4, it is expected that River Road, Webster Street, and Burlington Road would be the preferred detour option. Given the proximity of the proposed Monteith Drive bridge to the existing Route 177 bridge, it is likely that most vehicular routes outside of Route 4 and Route 177 did not change with the closure of the Route 177 bridge.

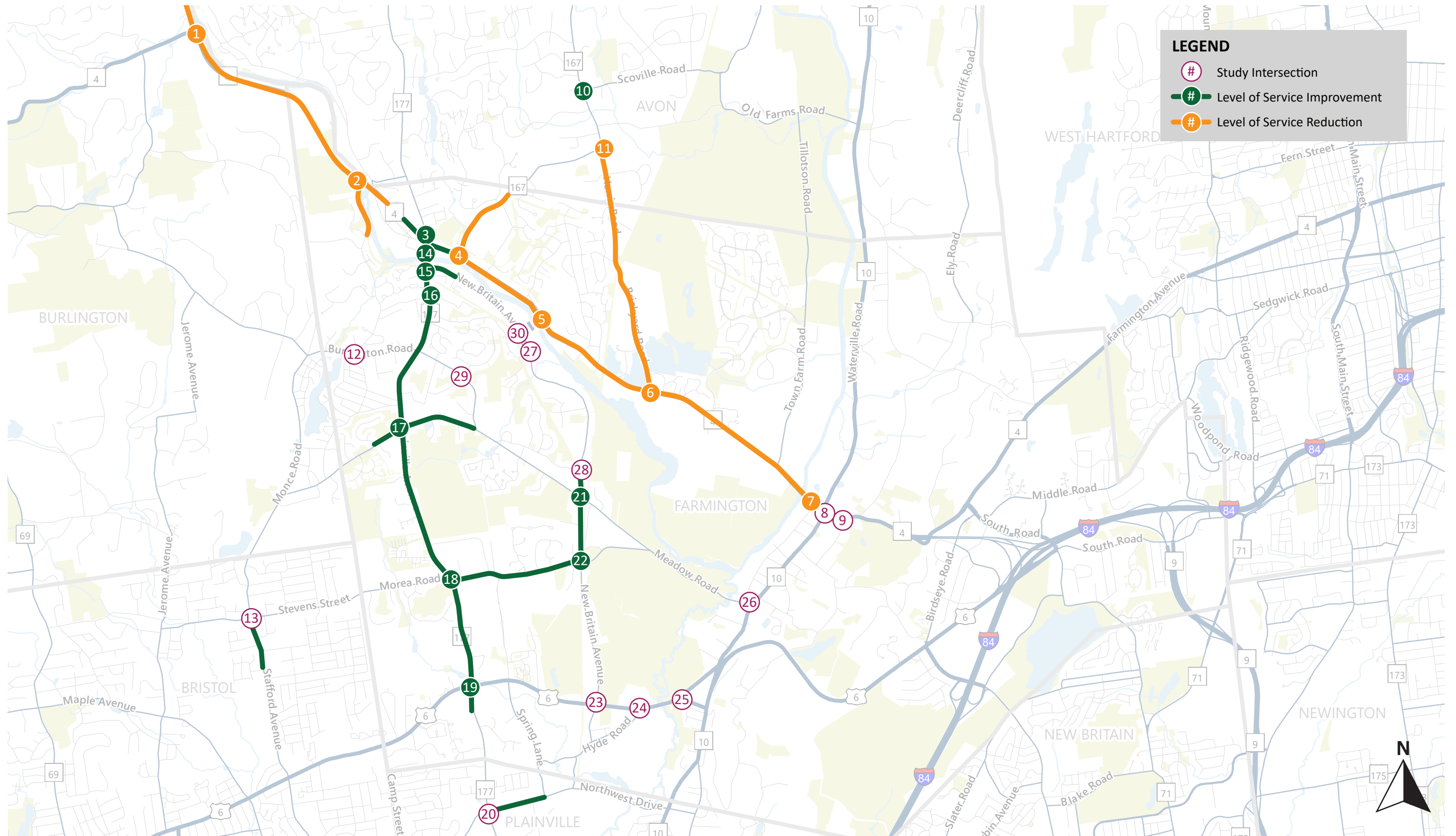
Intersection capacity analysis and queue analysis was performed at the study intersections under Scenario 4 (2050 Build with Route 177 Bridge Out Conditions) to evaluate each intersection's ability to process traffic volumes under this potential future condition. The study intersections were evaluated using *Synchro 11* (*Trafficware*) traffic analysis software package. The summary tables and *Synchro* analysis worksheets are included in Appendix F.

Based on the intersection capacity analysis results of the 26 intersections, overall LOS at four study intersections is expected to deteriorate, overall LOS at three study intersections is expected to improve, and overall LOS at 19 study intersections is expected to stay the same under Scenario 4 (2050 Build with Route 177 Bridge Out Conditions) compared to Scenario 2 (2050 Build Conditions) under one or more peak hours.

**Figure 16** displays the general operational changes within the study area that are expected to occur if the Route 177 bridge is closed under future build conditions.



Figure 16 - Future (2050) Build Conditions Operational Changes with Route 177 Bridge Out (Comparison of Scenarios 2 & 4)



In general, the operations at the study intersections on Route 4 (Canton Road [Route 179] at Spielman Highway [Route 4], River Road at Collinsville Road [Route 4], Farmington Avenue [Route 4] and West Avon Road [Route 167], Bridgewater Road/Brickyard Road at Farmington Avenue [Route 4], Garden Street at Farmington Avenue [Route 4], and Main Street/Waterville Road [Route 10] at Farmington Avenue [Route 4]) are expected to deteriorate with the closure of the Route 177 bridge compared to Scenario 2 (2050 Build Conditions).

Alternatively, the operations at the study intersections along Route 177 (South Main Street/Lovely Street [Route 177] at School Street/Farmington Avenue [Route 4], South Main Street [Route 177] at Mill Street, South Main Street [Route 177] at Railroad Avenue/New Britain Avenue, South Main Street [Route 177] at Webster Street, Plainville Avenue [Route 177] at Coppermine Road, Plainville Avenue [Route 177] at Morea Road/Meadow Road, and Plainville Avenue [Route 177] at Scott Swamp Road [US Route 6]) are expected to improve with the closure of the Route 177 bridge compared to Scenario 2 (2050 Build Conditions).



## 5.0 Development of Alternatives

### 5.1 Proposed Alternatives

Intersection improvement alternatives in vicinity of the new bridge were investigated and developed as part of this study. These alternatives focused on further enhancing the improved connections that the proposed Monteith Drive bridge would offer and include geometric improvements at the termini of the bridge at Farmington Avenue and New Britain Avenue, traffic operation improvements, pedestrian, and bicycle facility improvements. Specifically, the improvements that were considered include the following:

- Traffic signalization and geometric improvements at the intersections of the new bridge at Farmington Avenue and at New Britain Avenue.
- Roundabouts at both bridge termini at Farmington Avenue and New Britain Avenue.
- A new multi-use path along the Farmington River connecting with New Britain Avenue, Oakridge and the Farmington Canal Heritage Trail to the south.
- New sidewalks and bike lanes on the proposed bridge.

The following three Alternatives were developed using combinations of the outlined improvements and are described in more detail below.

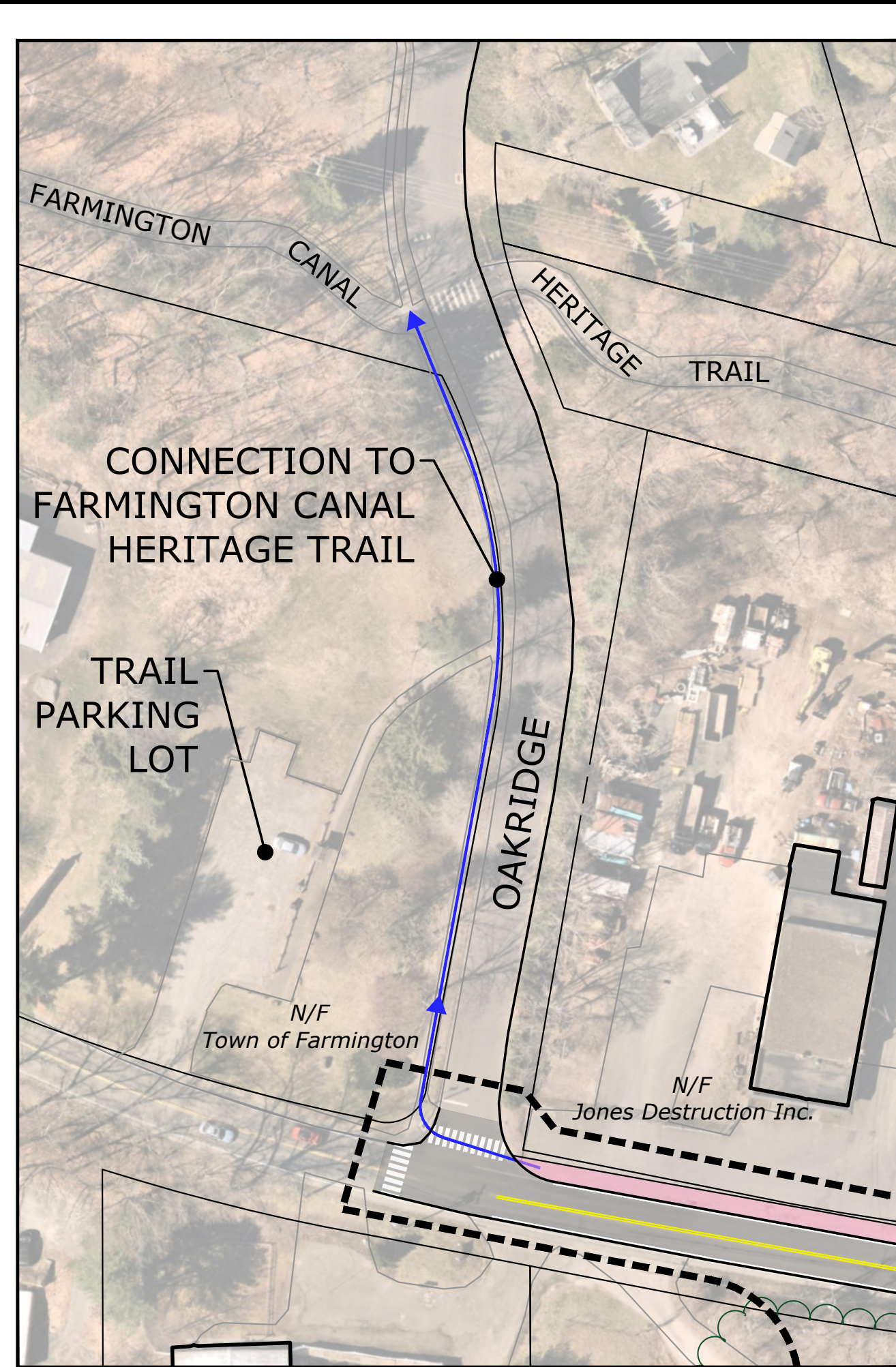
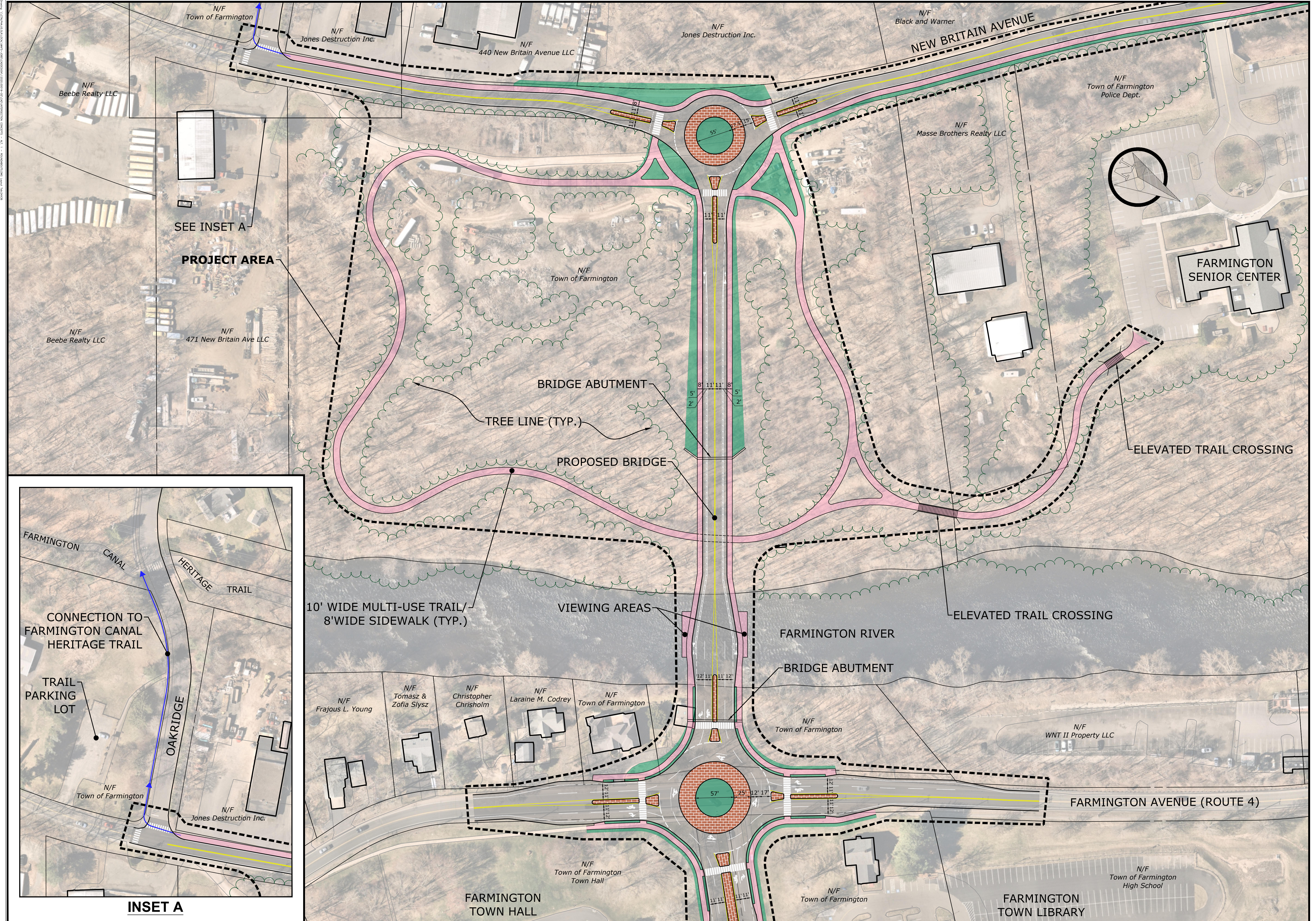
- **Improvement Alternative 1** – Roundabout Option
- **Improvement Alternative 2** – Traffic Signalization Option
- **Improvement Alternative 3** – Traffic Signalization & Roundabout Option

#### 5.1.1 Improvement Alternative 1 - Roundabout Option

Improvement Alternative 1 which is presented in **Figure 17** includes the following:

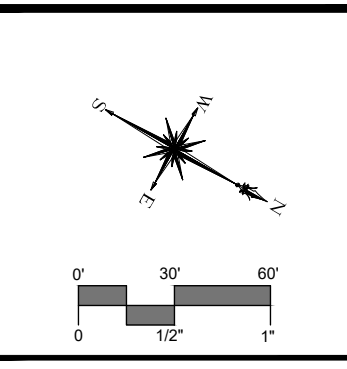
- Proposed Monteith Drive bridge with four travel lanes (two travel lanes in each direction) which tapers down to one travel lane in each direction at the segment from the southerly bridge abutment to New Britain Avenue. This new connection will also include 5-foot bike-lanes and 8-foot sidewalks and a viewing area overlooking the Farmington River on both sides.
- A 165-foot diameter double lane roundabout is proposed at the intersection of the new bridge with Farmington Avenue to the north, while a 120-foot diameter single lane roundabout is proposed at the intersection with New Britain Avenue. Both roundabouts would include a mountable truck apron surrounding the central island and splitter islands with crosswalks to accommodate the safe passage of pedestrians.
- Roadway widening on Farmington Avenue and Monteith Drive to provide a dedicated right turn lane and shared through-left turn lane on all legs of the proposed double lane roundabout.
- New 5-foot sidewalks along the south side of New Britain Avenue between the roundabout and Oakridge as well as on the north side towards the Farmington Senior Center.
- 10-foot-wide multi-use path along the Farmington River which connects to the Senior Center, Oakridge neighborhood and Farmington Canal Heritage Trail to the south.





SEE INSET A  
PROJECT AREA

INSET A



DESCRIPTION	DATE	BY

INTERSECTION CONCEPT PLAN 1 - ROUNDABOUTS  
FARMINGTON AREA CONNECTIVITY STUDY  
FARMINGTON, CT

MSM	WF	KB
DESIGNED	DRAWN	CHECKED
SCALE: 1"=60'		
DATE: MAY 24, 2023		
PROJECT NO: 12020.00019		
SHEET NO:		
SHEET NAME: FIG 17		

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### 5.1.2 Improvement Alternative 2 - Traffic Signalization Option

Improvement Alternative 2, presented in **Figure 18** includes:

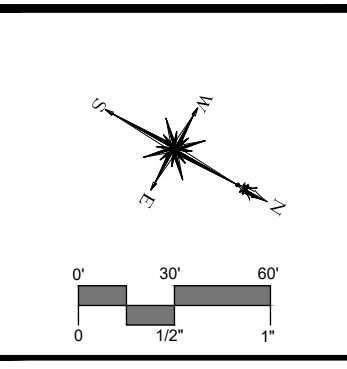
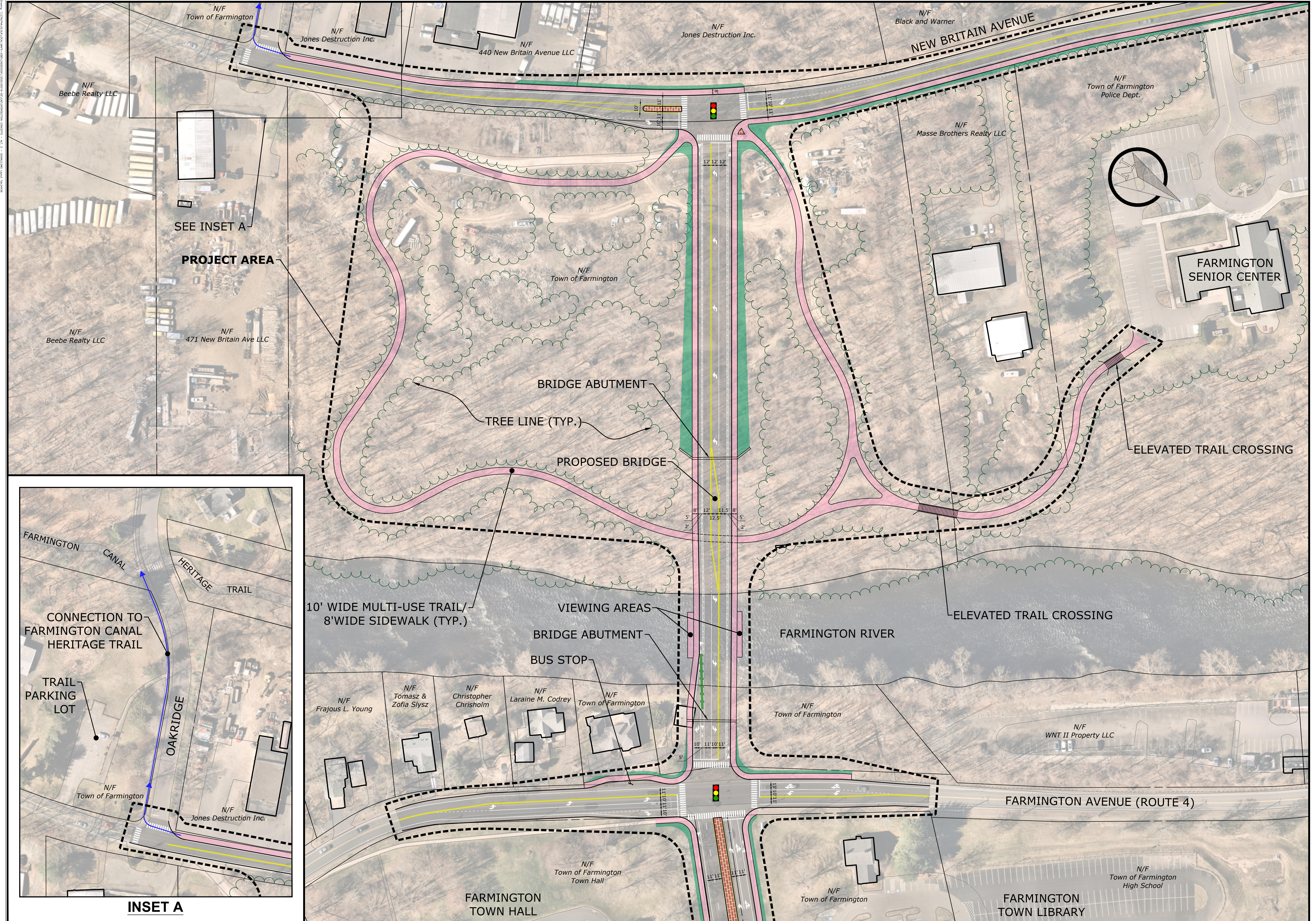
- Proposed Monteith Drive bridge with four travel lanes (two travel lanes in each direction) which tapers down to one travel lane in each direction at the segment from the southerly bridge abutment to New Britain Avenue. This new connection will also include 5-foot bike-lanes and 8-foot sidewalks and a viewing area overlooking the Farmington River on both sides.
- New traffic signals at the intersection of the new bridge at Farmington Avenue and New Britain Avenue. The signals will include new mast arms, vehicular detection and emergency pre-emption equipment.
- Geometric improvements at the Farmington Avenue intersection to include a dedicated left turn and shared through/right turn lane on the northbound, southbound and eastbound approaches and a dedicated left turn, dedicated right turn and single through travel lane on the westbound approach.
- Geometric improvements at the New Britain Avenue intersection to include a dedicated left turn and shared through/right turn lane on the bridge southbound approach, a single through travel lane and dedicated left turn lane on the New Britain Avenue eastbound approach as well as a single through lane and dedicated right turn lane on the New Britain Avenue westbound approach.
- New 5-foot sidewalks along the south side of New Britain Avenue between the signalized intersection and Oakridge as well as on the north side towards the Farmington Senior Center.
- Similar to Alternative 1, an 8-foot-wide multi-use path along the Farmington River which connects to the Senior Center, Oakridge neighborhood and Farmington Canal Heritage Trail.

### 5.1.3 Improvement Alternative 3 - Roundabout & Traffic Signal Option

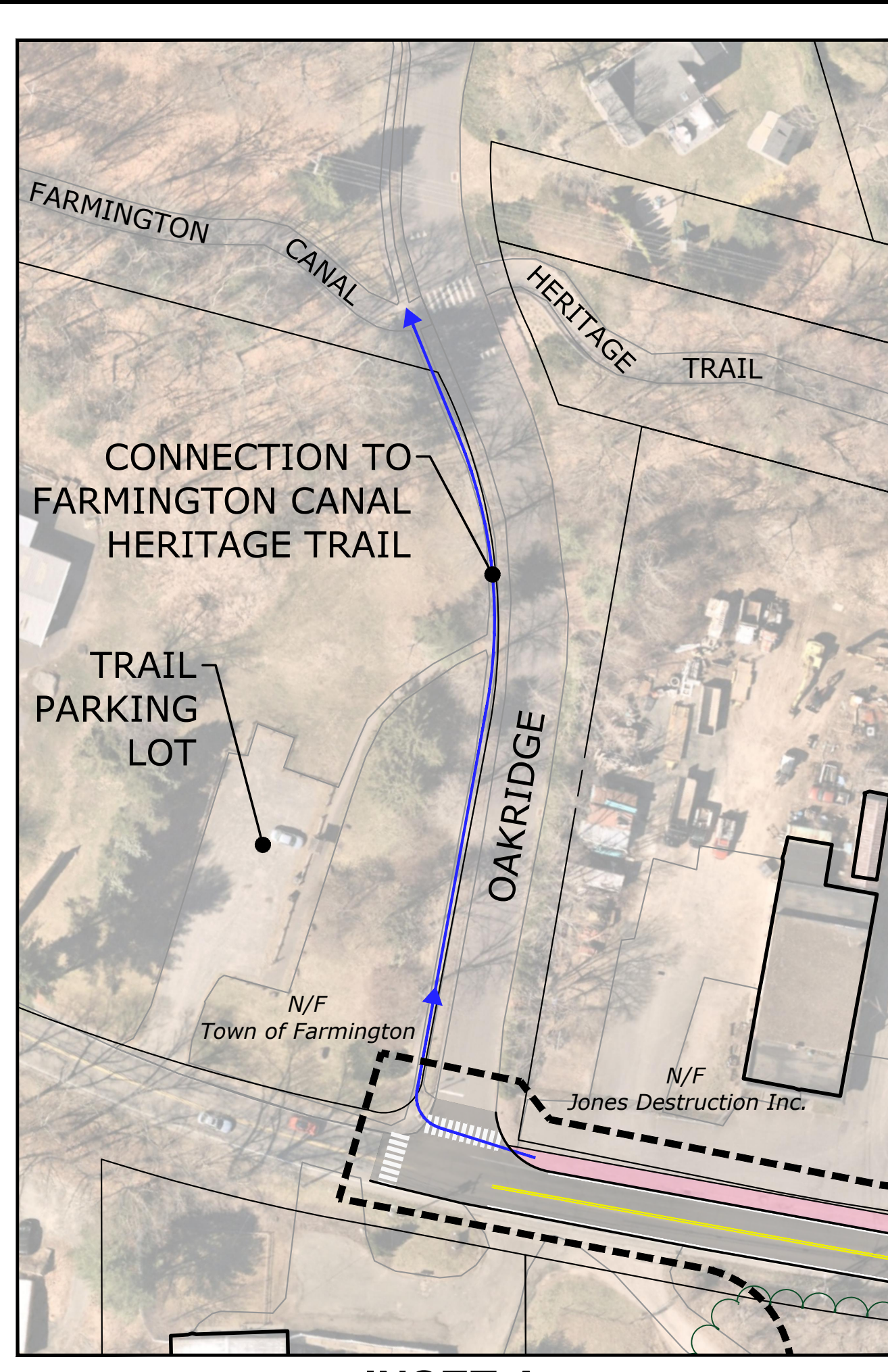
Preliminary Improvement Alternative 3 which is presented in **Figure 19**, is a combination of Alternatives 1 and 2 and includes:

- Proposed Monteith Drive bridge with 5-foot bike-lanes and 8-foot sidewalks and a viewing area overlooking the Farmington River on both sides.
- A traffic signal at the intersection of the new bridge at Farmington Avenue similar to Alternative 2 and a single lane roundabout at New Britain Avenue, similar to Alternative 1.
- Geometric improvements at the Farmington Avenue intersection to include a dedicated left turn and shared through/right turn lane on the northbound, southbound and eastbound approaches and a dedicated left turn, dedicated right turn and single through travel lane on the westbound approach.
- Similar to Alternatives 1 and 2, new 5-foot sidewalks along the south side of New Britain Avenue between the signalized intersection and Oakridge as well as on the north side towards the Farmington Senior Center.
- Similar to Alternatives 1 and 2, an 8-foot-wide multi-use path along the Farmington River which connects to the Senior Center, Oakridge and Farmington Canal Heritage Trail.





DESCRIPTION	DATE	BY

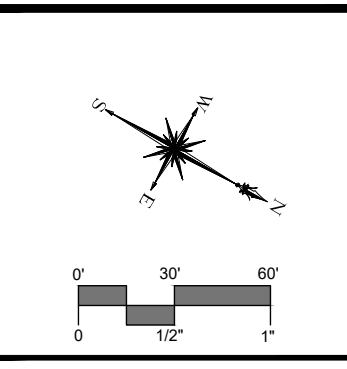
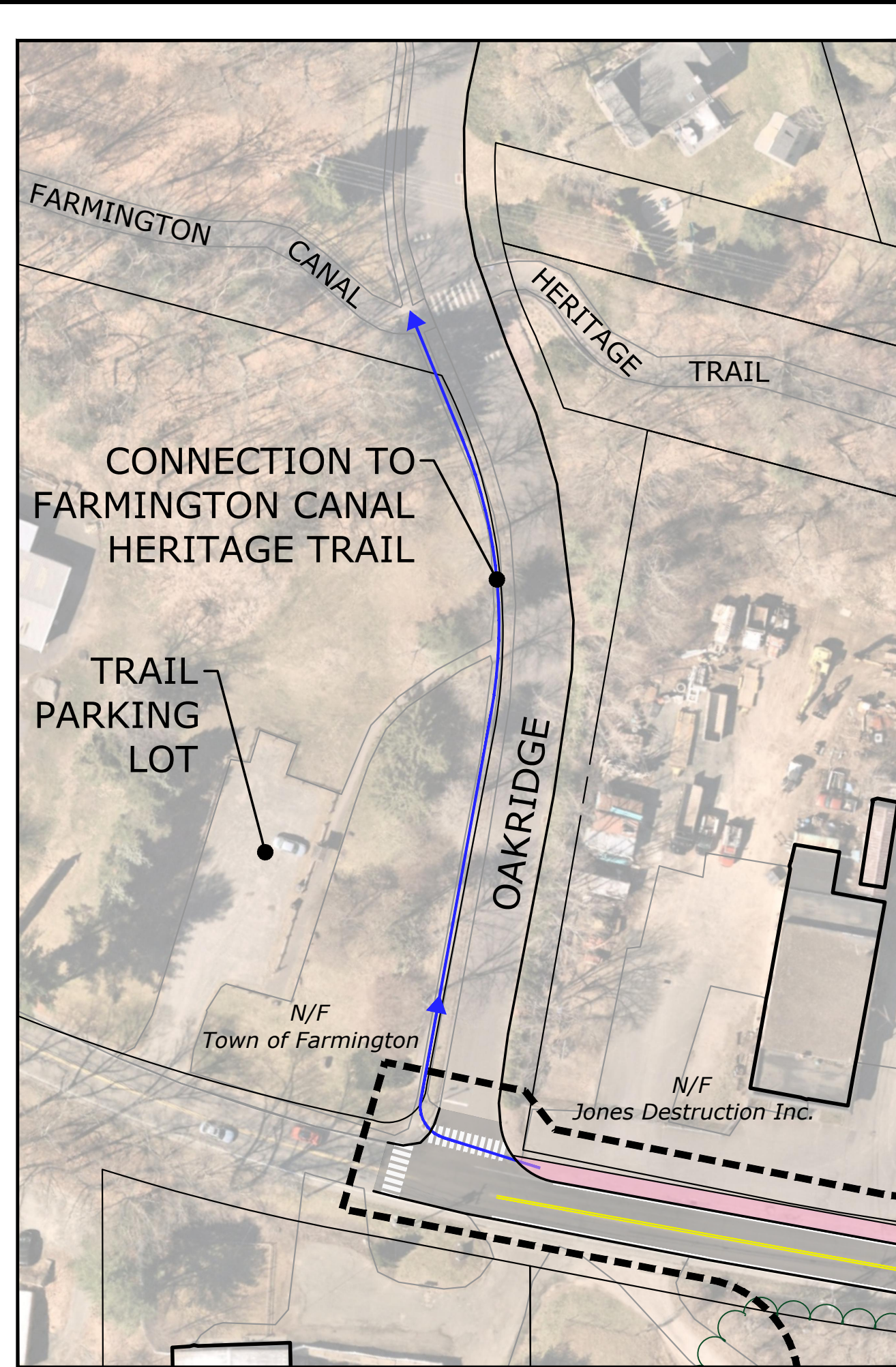
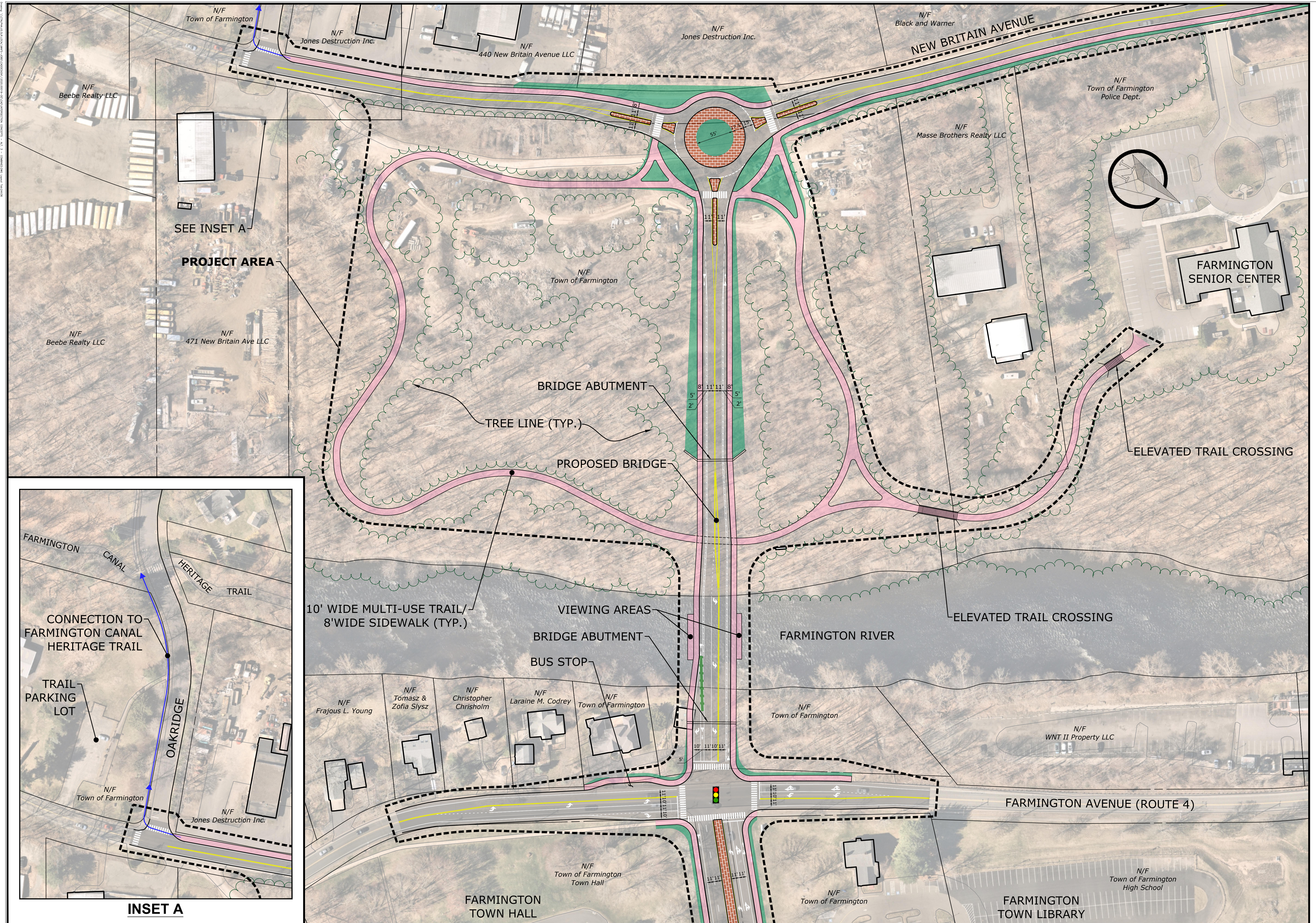


**INSET A**

**INTERSECTION CONCEPT PLAN 2 - SIGNALIZED**  
**FARMINGTON AREA CONNECTIVITY STUDY**  
 FARMINGTON, CT

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DESIGNED	DRAWN	CHECKED
SCALE: 1"=60'		
DATE: MAY 24, 2023		
PROJECT NO: 12020.00019		
SHEET NO:		
<b>FIG 18</b>		

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DESCRIPTION	DATE	BY

DESCRIPTION	DATE	BY

INTERSECTION CONCEPT PLAN 3 - ROUNDABOUT AND SIGNAL  
 FARMINGTON AREA CONNECTIVITY STUDY  
 FARMINGTON, CT

MSM	WF	KB
DESIGNED	DRAWN	CHECKED
SCALE: 1"=60'		
DATE: MAY 24, 2023		
PROJECT NO: 12020.00019		
SHEET NO:		
SHEET NAME: FIG 19		

## 5.2 Traffic Level of Service - Proposed Alternatives

For each of the proposed alternatives, LOS analysis was conducted for the intersections of the proposed Monteith Drive bridge at Farmington Avenue and at New Britain Avenue under 2050 Build traffic conditions. The results of the LOS analyses are presented in Table 6 below and indicate acceptable levels of service for each alternative during the 2050 Build morning and afternoon peak hours. All movements are anticipated to operate at acceptable LOS D or better under each of the three proposed alternatives.

**Table 6 Future (2050) Conditions Capacity Analysis Summary – Alternatives**

INTERSECTION/LANE GROUP	2050 BUILD CONDITIONS LEVEL OF SERVICE					
	A.M. PEAK HOUR			P.M. PEAK HOUR		
	Alt 1	Alt 2	Alt 3	Alt 1	Alt 2	Alt 3
<b>5: Farmington Avenue (Route 4) &amp; Monteith Drive Bridge</b>						
Eastbound Left	A	B	B	A	A	A
Eastbound Through/Right	D	D	D	C	D	D
Westbound Left	A	D	D	A	D	D
Westbound Through	B	C	C	B	B	B
Westbound Right	A	B	B	A	A	A
Northbound Left	B	D	D	B	D	D
Northbound Through	D	D	D	B	C	C
Northbound Right		A	A		A	A
Southbound Left	A	D	D	A	C	C
Southbound Through/Right	A	D	D	A	D	D
<b>Overall</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>B</b>	<b>C</b>	<b>C</b>
<b>30: New Britain Avenue &amp; Monteith Drive Bridge</b>						
Eastbound Left/Thru	B	A	B	A	A	A
Eastbound Through		A			A	
Westbound Thru/Right	A	B	A	A	B	A
Westbound Right		A			A	
Southbound Left/Right	A	C	A	A	B	A
Southbound Right		A			A	
<b>Overall</b>	<b>A</b>	<b>B</b>	<b>A</b>	<b>A</b>	<b>B</b>	<b>A</b>



## 6.0 Findings and Recommendations

The Farmington Area Connectivity Study was initiated by the Capitol Region Council of Governments (CRCOG) and the Town of Farmington to assess the potential impacts of another north-south bridge across the Farmington River in Farmington, Connecticut. The existing Route 177 bridge in Unionville is the only north-south transportation crossing over the Farmington River, which severely limits travel across Town and leads to increased congestion and delays particularly along Route 177 and adjacent Route 4.

The study analyzed the impact of a potential new bridge across the Farmington River connecting the intersection of Monteith Drive at Farmington Avenue to New Britain Avenue to the south. A preliminary engineering concept of the bridge was developed by the Town in 2018. Tasks completed under this study include an extensive data collection, review of existing roadway conditions and multimodal amenities, assessment of existing and future traffic operations at 30 study intersections, and development of intersection improvement alternatives at the new bridge intersections with Farmington Avenue and New Britain Avenue.

The following are the findings and recommendations from the study:

1. A new bridge across the river will improve local and regional travel by increasing travel route options, which will lead to better distribution of traffic, shorter travel times across Town, and reduced congestion on Route 177, Route 10, and River Road.
2. LOS analysis showed that areas further away from the new bridge, including Route 4 west of Route 177, Route 177, and Route 10, would see overall improvement in LOS. Alternatively, operations in the vicinity of the new bridge along Brickyard Road and New Britain Avenue would experience some decline in LOS due to the rerouting of traffic; however, the LOS would still be at acceptable levels within these corridors.
3. LOS analysis conducted for the intersection improvement alternatives associated with the new bridge indicate each alternative would operate at acceptable levels of service during future (2050) Build morning and afternoon peak hours. All movements are anticipated to operate at acceptable LOS D or better under each of the three improvement alternatives.
4. A new bridge will provide a critical link between the Farmington Town Complex (Town Hall, Town Library, and high school) to the Police Station, Community Center, Senior Citizen Center, and Public Works facility.
5. The new connection will improve emergency response time from the Police Station and Public Works facility on New Britain Avenue across the river. It is important to note that the new bridge would provide a direct connection to Farmington High School located on Monteith Drive.
6. It is not anticipated that the new bridge would encourage drivers to cut through the Oakridge and surrounding neighborhoods. Travel times through Oakridge were found to range from 1 minute to 5.5 minutes longer and, therefore, is not a viable cut-through route.
7. The new bridge will enhance resiliency of the transportation system by providing an alternative to the already vulnerable existing Route 177 bridge.



## 7.0 Closure

This document has been prepared by SLR International Corporation (SLR). The material and data in this report were prepared under the supervision and direction of the undersigned.

Sincerely,

**SLR International Corporation**



**Kwesi Brown, PE, PTOE**  
US Manager of Transportation Engineering

12020.00019.j1224.rpt-new.docx





# Appendix A Traffic Counts

## Farmington Area Connectivity Study

Capitol Region Council of Governments and Town of Farmington

SLR Project No.: 141.12020.00019

January 16, 2024

File Name: 1338-1wXX.xls  
 Start Date: 11/3/2021  
 Start Time: 7:00:00 AM  
 Site Code: 01

Start Time	CANTON RD (ROUTE 179) SOUTHBOUND				WESTBOUND				CANTON RD (ROUTE 4) NORTHBOUND				SPIELMAN HWY (ROUTE 4) EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
07:00 AM	34	68	0	0	0	0	0	0	0	37	38	0	71	0	47	0	295	0
07:15 AM	36	66	0	0	0	0	0	0	0	34	28	0	88	0	57	0	309	0
07:30 AM	30	60	0	0	0	0	0	0	0	44	58	0	94	0	68	0	354	0
07:45 AM	36	63	0	0	0	0	0	0	0	52	50	0	89	0	50	0	340	0
08:00 AM	35	73	0	0	0	0	0	0	0	41	23	1	102	0	63	0	337	1
08:15 AM	37	73	0	0	0	0	0	0	0	29	40	0	110	0	42	0	331	0
08:30 AM	34	58	0	0	0	0	0	0	0	46	40	0	88	0	72	0	338	0
08:45 AM	30	67	0	0	0	0	0	0	0	38	42	0	98	0	56	0	331	0
04:00 PM	83	52	0	0	0	0	0	0	0	92	114	0	91	0	44	0	476	0
04:15 PM	86	73	0	0	0	0	0	0	0	92	120	0	63	0	60	0	494	0
04:30 PM	60	71	0	0	0	0	0	0	0	97	104	0	84	0	52	0	468	0
04:45 PM	76	69	0	0	0	0	0	0	0	97	110	0	86	0	54	1	492	1
05:00 PM	72	73	0	0	0	0	0	0	0	80	91	0	83	0	56	1	455	1
05:15 PM	85	64	0	0	0	0	0	0	0	63	131	0	91	0	57	0	491	0
05:30 PM	77	83	0	0	0	0	0	0	0	87	100	0	86	0	53	0	486	0
05:45 PM	63	58	0	0	0	0	0	0	0	65	79	0	79	0	35	0	379	0

Start Time	CANTON RD (ROUTE 179) SOUTHBOUND				WESTBOUND				CANTON RD (ROUTE 4) NORTHBOUND				SPIELMAN HWY (ROUTE 4) EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
AM PEAK	7:30 - 8:30 AM				0	0	0	0	0	166	171	1	395	0	223	0	1362	1
PM PEAK	4:00 - 5:00 PM				0	0	0	0	0	378	448	0	324	0	210	1	1930	1

File Name: 1338-2THREVISEDXX.xls  
 Start Date: 11/3/2021  
 Start Time: 7:00:00 AM  
 Site Code: 02

Start Time	SOUTHBOUND				COLLINSVILLE RD (ROUTE 4) WESTBOUND				RIVER RD NORTHBOUND				COLLINSVILLE RD (ROUTE 4) EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
07:00 AM	0	0	0	0	0	46	5	0	14	0	7	0	15	111	0	0	198	0
07:15 AM	0	0	0	0	0	69	7	0	15	0	10	0	12	102	0	0	215	0
07:30 AM	0	0	0	0	0	83	15	0	23	0	17	0	11	117	0	0	266	0
07:45 AM	0	0	0	0	0	61	15	0	22	0	12	0	16	123	0	0	249	0
08:00 AM	0	0	0	0	0	73	20	0	21	0	12	0	24	123	0	0	273	0
08:15 AM	0	0	0	0	0	69	18	0	25	0	10	0	26	122	0	0	270	0
08:30 AM	0	0	0	0	0	65	19	0	27	0	10	0	16	101	0	1	238	1
08:45 AM	0	0	0	0	0	64	17	0	28	0	8	0	21	107	0	0	245	0
04:00 PM	0	0	0	0	0	108	19	0	30	0	20	0	15	86	0	0	278	0
04:15 PM	0	0	0	0	0	105	20	0	25	0	23	0	14	78	0	0	265	0
04:30 PM	0	0	0	0	0	131	18	0	24	0	35	2	21	87	0	0	316	2
04:45 PM	0	0	0	0	0	116	19	0	21	0	32	22	22	112	0	0	322	22
05:00 PM	0	0	0	0	0	125	31	0	20	0	28	20	21	95	0	0	320	20
05:15 PM	0	0	0	0	0	130	22	0	20	0	31	15	18	86	0	0	307	15
05:30 PM	0	0	0	0	0	122	24	2	19	0	22	30	30	100	0	1	317	33
05:45 PM	0	0	0	0	0	108	25	0	21	0	20	16	15	113	0	1	302	17

Start Time	SOUTHBOUND				COLLINSVILLE RD (ROUTE 4) WESTBOUND				RIVER RD NORTHBOUND				COLLINSVILLE RD (ROUTE 4) EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
AM PEAK	7:30 - 8:30 AM				0	286	68	0	91	0	51	0	77	485	0	0	1058	0
PM PEAK	4:45 - 5:45 PM				0	493	96	2	80	0	113	87	91	393	0	1	1266	90

File Name: 1338-3thXX.xls  
 Start Date: 10/27/2021  
 Start Time: 7:00:00 AM  
 Site Code: 03

Start Time	LOVELY ST (ROUTE 177) SOUTHBOUND					FARMINGTON AVE (ROUTE 4) WESTBOUND					S MAIN ST (ROUTE 177) NORTHBOUND					SCHOOL ST EASTBOUND					FARMINGTON AVE (ROUTE 4) SOUTH EASTBOUND					ALL	
	Right 2	Right	Thru	Left	Peds	Right 2	Right	Thru	Left	Peds	Right	Thru	Left	Left 2	Peds	Right	Thru	Left	Left 2	Peds	Right 2	Right	Left	Left 2	Peds	VEH	PEDS
07:00 AM	0	1	36	17	0	8	44	8	56	0	130	14	26	0	0	1	7	0	0	0	0	34	75	0	0	457	0
07:15 AM	1	0	69	15	0	7	53	2	60	0	75	58	26	0	0	4	6	0	0	0	0	56	73	2	0	507	0
07:30 AM	2	0	65	11	0	16	59	4	86	0	55	65	31	1	0	1	3	0	0	0	0	45	92	0	0	536	0
07:45 AM	1	0	58	17	1	14	34	7	38	0	76	52	50	0	0	5	2	0	0	0	0	37	71	2	0	464	1
08:00 AM	0	0	50	26	0	13	45	7	44	0	69	64	25	0	0	3	8	0	0	0	0	48	106	1	0	509	0
08:15 AM	2	1	68	24	0	9	57	9	43	0	61	49	30	0	3	2	5	0	0	0	2	38	97	2	0	499	3
08:30 AM	1	0	49	22	0	5	63	11	38	0	72	57	39	8	0	16	30	0	0	1	0	46	83	2	0	542	1
08:45 AM	0	1	59	15	0	13	52	5	38	0	61	72	28	1	0	1	7	0	0	0	0	35	110	0	0	498	0
04:00 PM	2	0	60	12	0	12	103	4	75	0	56	75	44	2	1	2	9	0	0	0	3	24	84	3	0	570	1
04:15 PM	3	0	104	14	0	19	97	2	76	0	73	76	48	0	0	2	4	0	1	0	0	31	71	1	0	622	0
04:30 PM	2	0	79	25	0	24	99	11	63	2	63	63	40	0	0	2	10	0	0	0	2	36	82	2	0	603	2
04:45 PM	1	0	74	19	0	20	99	3	73	0	70	83	45	0	1	4	13	0	0	0	0	44	67	1	0	616	1
05:00 PM	3	2	61	18	0	17	96	7	76	0	60	78	43	0	0	4	9	0	1	0	0	36	95	4	0	610	0
05:15 PM	4	0	70	24	0	15	127	1	66	0	54	84	36	0	0	4	6	0	0	0	0	24	93	1	0	609	0
05:30 PM	2	1	65	22	0	26	86	5	71	0	45	71	36	0	0	3	13	0	0	0	0	30	88	5	0	569	0
05:45 PM	1	0	61	23	0	16	80	5	75	0	57	71	36	0	0	0	2	0	0	0	0	30	80	0	0	537	0

Start Time	LOVELY ST (ROUTE 177) SOUTHBOUND					FARMINGTON AVE (ROUTE 4) WESTBOUND					S MAIN ST (ROUTE 177) NORTHBOUND					SCHOOL ST EASTBOUND					FARMINGTON AVE (ROUTE 4) SOUTH EASTBOUND					ALL	
	Right 2	Right	Thru	Left	Peds	Right 2	Right	Thru	Left	Peds	Right	Thru	Left	Left 2	Peds	Right	Thru	Left	Left 2	Peds	Left 2	Left	Right	Right 2	Peds	VEH	PEDS
AM PEAK 8:00 - 9:00 AM	3	2	226	87	0	40	217	32	163	0	263	242	122	9	3	22	50	0	0	1	2	167	396	5	0	2048	4
PM PEAK 4:15 - 5:15 PM	9	2	318	76	0	80	391	23	288	2	266	300	176	0	1	12	36	0	2	0	2	147	315	8	0	2451	3

File Name: 1338-4thXX.xls  
 Start Date: 10/27/2021  
 Start Time: 7:00:00 AM  
 Site Code: 04

Start Time	W AVON RD (ROUTE 167) SOUTHBOUND				FARMINGTON AVE (ROUTE 4) WESTBOUND				NORTHBOUND				FARMINGTON AVE (ROUTE 4) EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
07:00 AM	21	0	14	1	8	81	0	1	0	0	0	0	0	208	42	0	374	2
07:15 AM	28	0	7	1	11	104	0	0	0	0	0	0	0	109	62	0	321	1
07:30 AM	33	0	11	0	13	130	0	0	0	0	0	1	0	93	52	0	332	1
07:45 AM	33	0	9	1	9	73	0	0	0	0	0	1	0	141	52	0	317	2
08:00 AM	33	0	9	0	5	102	0	1	0	0	0	2	0	171	47	0	367	3
08:15 AM	41	0	10	0	13	101	0	0	0	0	0	2	0	141	57	0	363	2
08:30 AM	36	0	15	0	7	83	0	0	0	0	0	0	0	162	43	0	346	0
08:45 AM	28	0	15	0	10	88	0	2	0	0	0	2	0	153	50	0	344	4
04:00 PM	59	0	11	0	7	134	0	0	0	0	0	2	0	123	41	0	375	2
04:15 PM	42	0	11	0	17	158	0	0	0	0	0	0	0	126	44	0	398	0
04:30 PM	57	0	8	0	18	141	0	0	0	0	0	0	0	141	45	0	410	0
04:45 PM	60	0	13	0	14	134	0	0	0	0	0	0	0	133	44	0	398	0
05:00 PM	66	0	11	0	24	134	0	0	0	0	0	0	0	129	57	0	421	0
05:15 PM	65	0	20	0	17	148	0	0	0	0	0	0	0	125	39	0	414	0
05:30 PM	50	0	15	0	10	167	0	0	0	0	0	0	0	138	43	0	423	0
05:45 PM	57	0	13	0	14	123	0	0	0	0	0	0	0	148	46	0	401	0

Start Time	W AVON RD (ROUTE 167) SOUTHBOUND				FARMINGTON AVE (ROUTE 4) WESTBOUND				NORTHBOUND				FARMINGTON AVE (ROUTE 4) EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
AM PEAK	8:00 - 9:00 AM				35	374	0	3	0	0	0	6	0	627	197	0	1420	9
PM PEAK	5:00 - 6:00 PM				65	572	0	0	0	0	0	0	0	540	185	0	1659	0

File Name: 1328-1tuXX.xls  
 Start Date: 9/21/2021  
 Start Time: 6:30:00 AM  
 Site Code: 05

Start Time	MONTEITH DR SOUTHBOUND				FARMINGTON AVE (ROUTE 4) WESTBOUND				NORTHBOUND				FARMINGTON AVE (ROUTE 4) EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
07:00 AM	38	0	62	1	217	63	0	0	0	0	0	0	0	72	125	0	577	1
07:15 AM	61	0	80	2	198	77	0	0	0	0	0	0	0	55	139	0	610	2
07:30 AM	38	0	29	0	13	81	0	0	0	0	0	0	0	148	30	0	339	0
07:45 AM	7	0	4	0	18	72	0	0	0	0	0	0	0	160	9	0	270	0
08:00 AM	1	0	6	0	10	76	0	1	0	0	0	0	0	130	9	0	232	1
08:15 AM	1	0	8	0	13	95	0	0	0	0	0	0	0	142	11	0	270	0
08:30 AM	2	0	6	0	12	85	0	0	0	0	0	0	0	170	20	1	295	1
08:45 AM	4	0	6	0	17	53	0	1	0	0	0	0	0	171	28	0	279	1
04:00 PM	13	0	21	0	13	119	0	0	0	0	0	0	0	115	4	0	285	0
04:15 PM	13	0	18	0	10	150	0	0	0	0	0	0	0	113	7	0	311	0
04:30 PM	29	0	31	0	6	133	0	0	0	0	0	0	0	103	7	0	309	0
04:45 PM	6	0	18	0	11	125	0	0	0	0	0	0	0	140	14	0	314	0
05:00 PM	28	0	29	0	11	148	0	0	0	0	0	0	0	108	11	0	335	0
05:15 PM	10	0	14	0	18	138	0	0	0	0	0	0	0	185	17	0	382	0
05:30 PM	15	0	15	0	13	124	0	0	0	0	0	0	0	136	25	0	328	0
05:45 PM	43	0	27	0	20	157	0	0	0	0	0	0	0	140	28	0	415	0

Start Time	MONTEITH DR SOUTHBOUND				FARMINGTON AVE (ROUTE 4) WESTBOUND				NORTHBOUND				FARMINGTON AVE (ROUTE 4) EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
AM PEAK	7:00 - 8:00 AM																	
	144	0	175	3	446	293	0	0	0	0	0	0	0	435	303	0	1796	3
PM PEAK	5:00 - 6:00 PM																	
	96	0	85	0	62	567	0	0	0	0	0	0	0	569	81	0	1460	0

File Name: 1338-6thXX.xls  
 Start Date: 10/28/2021  
 Start Time: 7:00:00 AM  
 Site Code: 06

Start Time	BRICKYARD RD SOUTHBOUND				FARMINGTON AVE (ROUTE 4) WESTBOUND				BRIDGEWATER RD NORTHBOUND				FARMINGTON AVE (ROUTE 4) EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
07:00 AM	14	0	76	0	40	173	2	0	0	0	1	0	1	114	2	0	423	0
07:15 AM	13	6	89	0	45	172	4	0	5	1	3	0	1	127	6	0	472	0
07:30 AM	3	1	99	0	48	82	14	2	5	0	0	0	1	152	8	0	413	2
07:45 AM	6	2	87	0	41	72	9	0	8	0	2	0	3	165	13	0	408	0
08:00 AM	9	4	87	0	38	92	12	1	2	1	4	0	1	131	10	0	391	1
08:15 AM	7	3	62	0	48	76	11	0	5	4	4	0	7	155	17	0	399	0
08:30 AM	11	6	81	1	48	68	11	0	4	6	8	0	6	139	15	0	403	1
08:45 AM	9	10	53	0	46	101	16	0	10	4	2	0	10	151	18	0	430	0
04:00 PM	14	2	84	0	47	138	5	0	5	1	2	0	2	181	15	0	496	0
04:15 PM	19	1	61	0	53	152	11	0	8	3	1	0	1	120	5	0	435	0
04:30 PM	17	3	81	0	47	119	7	0	4	3	11	0	6	147	9	1	454	1
04:45 PM	11	7	61	0	58	139	4	1	9	9	4	0	8	145	12	0	467	1
05:00 PM	15	1	77	0	56	136	9	0	11	2	10	1	2	147	14	0	480	1
05:15 PM	20	2	78	0	64	134	6	0	10	2	5	0	4	164	17	0	506	0
05:30 PM	13	2	85	0	63	129	7	0	3	3	7	0	3	140	9	0	464	0
05:45 PM	18	1	45	0	40	132	1	0	5	1	6	0	3	129	15	0	396	0

Start Time	BRICKYARD RD SOUTHBOUND				FARMINGTON AVE (ROUTE 4) WESTBOUND				BRIDGEWATER RD NORTHBOUND				FARMINGTON AVE (ROUTE 4) EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
AM PEAK	7:00 - 8:00 AM																	
	36	9	351	0	174	499	29	2	18	1	6	0	6	558	29	0	1716	2
PM PEAK	4:45 - 5:45 PM																	
	59	12	301	0	241	538	26	1	33	16	26	1	17	596	52	0	1917	2

File Name: 1338-7tuXX.xls  
 Start Date: 10/19/2021  
 Start Time: 7:00:00 AM  
 Site Code: 07

Start Time	SOUTHBOUND				FARMINGTON AVE (ROUTE 4) WESTBOUND				GARDEN ST NORTHBOUND				FARMINGTON AVE (ROUTE 4) EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
07:00 AM	0	0	0	0	0	185	1	0	2	0	44	3	9	212	0	1	453	4
07:15 AM	0	0	0	0	0	160	0	0	3	0	35	0	12	257	0	2	467	2
07:30 AM	0	0	0	0	0	118	1	0	17	0	26	2	15	320	0	2	497	4
07:45 AM	0	0	0	0	0	141	1	0	7	0	40	1	13	283	0	1	485	2
08:00 AM	0	0	0	0	0	170	3	0	6	0	20	0	24	232	0	0	455	0
08:15 AM	0	0	0	0	0	126	5	0	10	0	31	1	11	285	0	0	468	1
08:30 AM	0	0	0	0	0	149	3	0	7	0	31	2	38	270	0	5	498	7
08:45 AM	0	0	0	0	0	177	2	0	12	0	47	2	18	254	0	3	510	5
04:00 PM	0	0	0	0	0	194	1	0	5	0	17	2	24	280	0	2	521	4
04:15 PM	0	0	0	0	0	190	6	0	3	0	31	1	29	267	0	1	526	2
04:30 PM	0	0	0	0	0	202	1	0	2	0	29	2	32	291	0	2	557	4
04:45 PM	0	0	0	0	0	177	4	0	4	0	30	1	21	256	0	0	492	1
05:00 PM	0	0	0	0	0	179	1	0	3	0	39	2	21	244	0	4	487	6
05:15 PM	0	0	0	0	0	209	2	0	5	0	34	0	32	256	0	1	538	1
05:30 PM	0	0	0	0	0	198	0	0	0	0	27	4	23	238	0	7	486	11
05:45 PM	0	0	0	0	0	200	2	0	5	0	26	0	13	225	0	0	471	0

Start Time	SOUTHBOUND				FARMINGTON AVE (ROUTE 4) WESTBOUND				GARDEN ST NORTHBOUND				FARMINGTON AVE (ROUTE 4) EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
AM PEAK	8:00 - 9:00 AM				0	622	13	0	35	0	129	5	91	1041	0	8	1931	13
PM PEAK	4:00 - 5:00 PM				0	763	12	0	14	0	107	6	106	1094	0	5	2096	11

File Name: 1338-8tuXX.xls  
 Start Date: 10/19/2021  
 Start Time: 7:00:00 AM  
 Site Code: 08

Start Time	WATERVILLE RD (ROUTE 10) SOUTHBOUND				FARMINGTON AVE (ROUTE 4) WESTBOUND				WATERVILLE RD (ROUTE 10) NORTHBOUND				FARMINGTON AVE (ROUTE 4) EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
07:00 AM	6	22	47	0	35	150	8	0	23	26	28	0	18	198	1	0	562	0
07:15 AM	4	25	58	0	55	129	10	0	22	39	30	0	32	229	1	0	634	0
07:30 AM	2	24	66	0	58	102	15	0	33	32	15	0	28	298	0	0	673	0
07:45 AM	4	29	53	0	54	129	14	0	42	37	35	0	24	279	3	0	703	0
08:00 AM	6	24	35	0	39	136	9	0	37	33	17	0	23	213	5	0	577	0
08:15 AM	2	34	42	0	26	107	22	8	21	39	34	0	33	251	13	0	624	8
08:30 AM	4	22	41	0	35	133	30	0	32	24	25	0	41	271	4	0	662	0
08:45 AM	2	34	39	0	22	136	8	0	32	33	40	0	36	232	7	0	621	0
04:00 PM	2	41	50	0	15	146	12	0	16	31	39	0	46	221	1	1	620	1
04:15 PM	2	40	51	0	17	151	14	0	19	33	41	0	50	243	0	1	661	1
04:30 PM	2	47	48	0	18	155	25	0	25	32	51	0	42	217	0	0	662	0
04:45 PM	2	30	48	0	28	170	24	0	10	20	32	0	73	221	0	0	658	0
05:00 PM	5	35	51	0	17	154	17	0	21	38	28	0	35	217	0	0	618	0
05:15 PM	6	40	42	0	18	157	16	0	7	39	37	0	38	214	1	0	615	0
05:30 PM	4	40	59	0	17	154	19	0	14	29	43	0	32	206	1	0	618	0
05:45 PM	5	34	55	0	17	177	20	0	29	29	32	0	35	183	1	0	617	0

Start Time	WATERVILLE RD (ROUTE 10) SOUTHBOUND				FARMINGTON AVE (ROUTE 4) WESTBOUND				WATERVILLE RD (ROUTE 10) NORTHBOUND				FARMINGTON AVE (ROUTE 4) EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
AM PEAK	7:15 - 8:15 AM																	
	16	102	212	0	206	496	48	0	134	141	97	0	107	1019	9	0	2587	0
PM PEAK	4:00 - 5:00 PM																	
	8	158	197	0	78	622	75	0	70	116	163	0	211	902	1	2	2601	2

File Name: 1338-9tuXX.xls  
 Start Date: 10/19/2021  
 Start Time: 7:00:00 AM  
 Site Code: 09

Start Time	BACKAGE RD SOUTHBOUND				FARMINGTON AVE (ROUTE 4) WESTBOUND				HIGH ST NORTHBOUND				FARMINGTON AVE (ROUTE 4) EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
07:00 AM	1	0	2	0	1	201	6	0	35	0	7	0	1	279	2	0	535	0
07:15 AM	1	0	0	0	2	180	5	0	56	0	9	0	9	290	2	0	554	0
07:30 AM	0	0	1	0	2	197	7	0	43	0	5	0	9	391	0	0	655	0
07:45 AM	0	0	0	0	1	199	7	0	46	1	7	0	8	351	2	0	622	0
08:00 AM	1	0	1	0	1	194	14	0	32	2	1	0	9	276	2	1	533	1
08:15 AM	1	0	1	0	3	166	14	0	47	1	5	0	12	294	2	0	546	0
08:30 AM	0	0	2	1	2	181	16	0	36	5	4	1	10	332	1	1	589	3
08:45 AM	0	1	0	0	1	189	14	0	35	1	12	0	12	267	2	0	534	0
04:00 PM	0	0	1	0	1	174	14	0	19	0	11	1	9	287	0	0	516	1
04:15 PM	2	0	0	0	1	195	15	1	16	1	10	0	6	316	2	0	564	1
04:30 PM	0	2	2	0	2	186	15	0	13	0	17	0	17	281	1	0	536	0
04:45 PM	0	0	1	0	1	182	14	0	22	0	22	0	4	289	0	0	535	0
05:00 PM	0	0	2	2	0	183	6	0	27	0	13	0	10	288	1	1	530	3
05:15 PM	0	1	4	0	2	178	10	0	11	3	11	0	6	276	0	0	502	0
05:30 PM	2	1	2	2	2	184	14	0	15	1	14	0	7	264	3	0	509	2
05:45 PM	1	0	0	0	1	185	17	0	18	1	18	0	9	258	2	0	510	0

Start Time	BACKAGE RD SOUTHBOUND				FARMINGTON AVE (ROUTE 4) WESTBOUND				HIGH ST NORTHBOUND				FARMINGTON AVE (ROUTE 4) EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
AM PEAK	7:00 - 8:00 AM				6	777	25	0	180	1	28	0	27	1311	6	0	2366	0
PM PEAK	4:15 - 5:15 PM				4	746	50	1	78	1	62	0	37	1174	4	1	2165	4

File Name: 1338-10thXX.xls  
 Start Date: 10/28/2021  
 Start Time: 7:00:00 AM  
 Site Code: 10

Start Time	W AVON RD (ROUTE 167) SOUTHBOUND				SCOVILLE RD WESTBOUND				W AVON RD (ROUTE 167) NORTHBOUND				SYCAMORE HILLS RD EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
07:00 AM	0	54	5	0	26	0	6	0	11	80	0	0	0	0	1	0	183	0
07:15 AM	2	72	14	2	13	0	10	0	14	57	1	0	0	0	1	0	184	2
07:30 AM	1	101	23	0	4	0	8	0	19	75	0	0	0	0	1	0	232	0
07:45 AM	0	139	30	1	6	0	10	0	36	113	0	0	0	0	2	0	336	1
08:00 AM	0	98	18	1	10	1	7	0	24	118	1	0	0	0	0	0	277	1
08:15 AM	0	80	28	1	4	0	7	0	29	87	0	1	0	1	0	1	236	3
08:30 AM	2	82	32	0	23	1	28	0	22	94	1	0	0	0	2	0	287	0
08:45 AM	2	79	15	0	35	1	20	0	16	103	1	1	1	0	6	1	279	2
04:00 PM	1	101	8	2	16	0	12	0	8	82	0	0	1	0	4	0	233	2
04:15 PM	0	113	9	1	20	0	13	0	2	100	1	0	1	2	1	0	262	1
04:30 PM	7	114	6	0	18	0	11	0	11	86	1	0	2	3	2	0	261	0
04:45 PM	18	119	17	0	14	0	13	0	10	77	0	1	2	3	3	0	276	1
05:00 PM	1	139	8	0	17	1	11	0	10	99	1	0	1	0	3	0	291	0
05:15 PM	3	126	11	0	22	0	9	0	8	137	0	0	1	0	0	0	317	0
05:30 PM	2	124	8	0	7	0	7	0	8	103	0	0	0	0	0	0	259	0
05:45 PM	1	103	6	0	7	1	9	0	11	79	1	0	0	0	4	0	222	0

Start Time	W AVON RD (ROUTE 167) SOUTHBOUND				SCOVILLE RD WESTBOUND				W AVON RD (ROUTE 167) NORTHBOUND				SYCAMORE HILLS RD EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
AM PEAK	7:45 - 8:45 AM																	
	2	399	108	3	43	2	52	0	111	412	2	1	0	1	4	1	1136	5
PM PEAK	4:30 - 5:30 PM																	
	29	498	42	0	71	1	44	0	39	399	2	1	6	6	8	0	1145	1

File Name: 1338-11thXX.xls  
 Start Date: 10/28/2021  
 Start Time: 7:00:00 AM  
 Site Code: 11

Start Time	W AVON RD (ROUTE 167) SOUTHBOUND				WESTBOUND				HARRIS RD NORTHBOUND				W AVON RD (ROUTE 167) EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
07:00 AM	13	53	0	0	0	0	0	0	0	38	4	0	26	0	38	0	172	0
07:15 AM	21	59	0	0	0	0	0	0	0	36	9	0	29	0	52	0	206	0
07:30 AM	25	66	0	0	0	0	0	0	0	54	4	0	34	0	75	0	258	0
07:45 AM	20	58	0	0	0	0	0	0	0	57	9	0	14	0	83	0	241	0
08:00 AM	34	78	0	0	0	0	0	0	0	39	13	0	9	0	52	0	225	0
08:15 AM	22	68	0	0	0	0	0	0	0	57	6	0	9	0	72	0	234	0
08:30 AM	29	65	0	0	0	0	0	0	0	73	9	0	7	0	64	0	247	0
08:45 AM	37	69	0	0	0	0	0	0	0	61	2	0	17	0	61	0	247	0
04:00 PM	68	58	0	0	0	0	0	0	0	55	13	0	11	0	44	0	249	0
04:15 PM	82	79	0	0	0	0	0	0	0	46	8	0	5	0	42	0	262	0
04:30 PM	67	85	0	0	0	0	0	0	0	45	11	0	9	0	51	0	268	0
04:45 PM	69	71	0	0	0	0	0	0	0	54	11	0	14	0	30	0	249	0
05:00 PM	74	79	0	0	0	0	0	0	0	66	10	0	14	0	47	0	290	0
05:15 PM	68	93	0	0	0	0	0	0	0	62	18	0	5	0	59	0	305	0
05:30 PM	76	87	0	0	0	0	0	0	0	55	7	0	5	0	44	0	274	0
05:45 PM	67	62	0	0	0	0	0	0	0	45	7	0	7	0	25	0	213	0

Start Time	W AVON RD (ROUTE 167) SOUTHBOUND				WESTBOUND				HARRIS RD NORTHBOUND				W AVON RD (ROUTE 167) EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
AM PEAK	7:30 - 8:30 AM				0	0	0	0	0	207	32	0	66	0	282	0	958	0
PM PEAK	4:45 - 5:45 PM				0	0	0	0	0	237	46	0	38	0	180	0	1118	0

File Name: 1338-12WXX.xls  
 Start Date: 11/3/2021  
 Start Time: 7:00:00 AM  
 Site Code: 12

Start Time	RIVER RD SOUTHBOUND				BURLINGTON RD WESTBOUND				NORTHBOUND				BURLINGTON RD EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
07:00 AM	10	0	8	0	2	4	0	0	0	0	0	0	0	36	14	0	74	0
07:15 AM	21	0	12	0	4	10	0	0	0	0	0	0	0	57	16	0	120	0
07:30 AM	20	0	7	0	1	10	0	0	0	0	0	0	0	38	22	0	98	0
07:45 AM	13	0	2	0	4	8	0	0	0	0	0	0	0	49	21	0	97	0
08:00 AM	15	0	4	0	3	8	0	0	0	0	0	1	0	40	18	0	88	1
08:15 AM	23	0	12	0	4	12	0	0	0	0	0	0	0	31	18	0	100	0
08:30 AM	19	0	7	0	4	9	0	0	0	0	0	0	0	32	33	0	104	0
08:45 AM	26	0	7	0	5	7	0	0	0	0	0	0	0	24	29	0	98	0
04:00 PM	26	0	9	0	12	28	0	0	0	0	0	0	0	13	28	0	116	0
04:15 PM	34	0	8	0	15	34	0	0	0	0	0	0	0	12	24	0	127	0
04:30 PM	42	0	5	0	11	28	0	0	0	0	0	0	0	18	41	0	145	0
04:45 PM	29	0	11	0	8	44	0	0	0	0	0	0	0	24	33	0	149	0
05:00 PM	39	0	5	0	16	44	0	0	0	0	0	0	0	22	31	0	157	0
05:15 PM	44	0	6	0	15	39	0	0	0	0	0	0	0	29	42	0	175	0
05:30 PM	37	0	11	0	19	34	0	0	0	0	0	0	0	22	27	0	150	0
05:45 PM	36	0	5	0	17	30	0	0	0	0	0	0	0	18	37	0	143	0

Start Time	RIVER RD SOUTHBOUND				BURLINGTON RD WESTBOUND				NORTHBOUND				BURLINGTON RD EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
AM PEAK	7:15 - 8:15 AM																	
	69	0	25	0	12	36	0	0	0	0	0	1	0	184	77	0	403	1
PM PEAK	4:45 - 5:45 PM																	
	149	0	33	0	58	161	0	0	0	0	0	0	0	97	133	0	631	0

File Name: 1338-13WXX.xls  
 Start Date: 11/3/2021  
 Start Time: 7:00:00 AM  
 Site Code: 13

Start Time	STAFFORD AVE SOUTHBOUND				STEVENS ST WESTBOUND				STAFFORD AVE NORTHBOUND				STEVENS ST EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
07:00 AM	5	43	13	0	7	12	15	0	4	25	10	2	12	62	4	0	212	2
07:15 AM	9	54	15	0	4	18	18	1	7	36	8	3	18	53	7	0	247	4
07:30 AM	9	54	14	0	6	20	11	0	16	43	13	3	32	85	8	0	311	3
07:45 AM	12	46	10	0	3	27	16	0	17	27	18	2	23	67	6	0	272	2
08:00 AM	3	34	7	0	4	28	20	0	15	22	11	0	19	55	8	0	226	0
08:15 AM	1	44	3	0	3	22	12	0	10	43	6	0	17	63	6	1	230	1
08:30 AM	5	55	14	0	2	21	18	0	8	38	10	0	23	55	4	0	253	0
08:45 AM	4	62	4	0	2	24	21	0	15	37	15	0	30	39	9	0	262	0
04:00 PM	9	65	4	0	11	70	15	0	15	60	24	0	16	28	6	0	323	0
04:15 PM	4	51	4	0	10	72	14	0	12	66	16	0	22	29	8	1	308	1
04:30 PM	9	50	4	0	6	67	13	0	20	75	27	0	13	40	9	0	333	0
04:45 PM	11	59	7	0	9	66	18	0	12	69	35	0	12	32	9	0	339	0
05:00 PM	9	49	7	0	9	73	18	0	17	66	29	0	15	35	9	1	336	1
05:15 PM	11	55	4	0	12	68	25	0	15	61	28	0	18	38	10	0	345	0
05:30 PM	10	50	9	0	12	69	13	0	13	57	18	0	14	26	5	0	296	0
05:45 PM	7	58	7	0	14	69	14	0	21	49	34	0	13	27	3	0	316	0

Start Time	STAFFORD AVE SOUTHBOUND				STEVENS ST WESTBOUND				STAFFORD AVE NORTHBOUND				STEVENS ST EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
AM PEAK	7:15 - 8:15 AM																	
	33	188	46	0	17	93	65	1	55	128	50	8	92	260	29	0	1056	9
PM PEAK	4:30 - 5:30 PM																	
	40	213	22	0	36	274	74	0	64	271	119	0	58	145	37	1	1353	1

File Name: 1338-14thXX.xls  
 Start Date: 10/27/2021  
 Start Time: 7:00:00 AM  
 Site Code: 14

Start Time	S MAIN ST (ROUTE 177) SOUTHBOUND				MILL ST WESTBOUND				S MAIN ST (ROUTE 177) NORTHBOUND				MILL ST EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
07:00 AM	3	134	0	0	3	2	5	0	15	192	10	0	17	2	7	0	390	0
07:15 AM	1	163	1	1	1	0	12	0	11	150	17	0	6	3	6	0	371	1
07:30 AM	6	188	1	0	3	1	8	0	11	142	18	0	12	0	7	0	397	0
07:45 AM	2	149	1	0	0	3	12	0	16	157	11	0	16	1	6	0	374	0
08:00 AM	6	133	1	0	2	0	10	0	14	147	31	0	14	2	10	0	370	0
08:15 AM	8	143	1	2	4	2	11	0	12	150	23	0	12	1	10	0	377	2
08:30 AM	3	119	3	0	1	2	8	0	17	153	34	2	31	0	12	0	383	2
08:45 AM	7	105	8	0	2	2	19	0	26	163	24	0	15	4	8	0	383	0
04:00 PM	7	159	3	0	10	4	31	0	39	164	28	0	19	4	10	0	478	0
04:15 PM	4	186	10	0	5	7	16	0	31	169	21	0	22	2	13	0	486	0
04:30 PM	7	172	6	0	6	2	26	0	23	132	20	0	21	5	14	0	434	0
04:45 PM	3	191	3	0	10	6	34	0	32	189	29	0	27	7	8	0	539	0
05:00 PM	5	163	1	1	5	2	27	0	34	175	26	1	24	4	8	0	474	2
05:15 PM	5	154	8	0	4	7	19	0	26	171	33	1	27	4	9	0	467	1
05:30 PM	3	150	3	0	5	7	32	0	19	166	25	2	21	3	6	0	440	2
05:45 PM	2	160	6	0	3	6	26	0	21	169	35	2	16	2	7	0	453	2

Start Time	S MAIN ST (ROUTE 177) SOUTHBOUND				MILL ST WESTBOUND				S MAIN ST (ROUTE 177) NORTHBOUND				MILL ST EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
AM PEAK	7:00 - 8:00 AM																	
	12	634	3	1	7	6	37	0	53	641	56	0	51	6	26	0	1532	1
PM PEAK	4:00 - 5:00 PM																	
	21	708	22	0	31	19	107	0	125	654	98	0	89	18	45	0	1937	0

File Name: 1338-15wXX.xls  
 Start Date: 10/27/2021  
 Start Time: 7:00:00 AM  
 Site Code: 15

Start Time	S MAIN ST (ROUTE 177) SOUTHBOUND				NEW BRITAIN AVE WESTBOUND				S MAIN ST (ROUTE 177) NORTHBOUND				RAILROAD AVE EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
07:00 AM	0	112	31	0	39	1	3	0	1	173	1	0	6	1	3	0	371	0
07:15 AM	1	135	49	0	35	1	2	0	7	138	3	0	6	1	0	0	378	0
07:30 AM	2	144	55	0	37	0	6	1	9	133	1	0	5	0	1	0	393	1
07:45 AM	0	136	46	0	30	0	4	3	1	156	3	0	6	4	1	0	387	3
08:00 AM	1	124	26	0	27	1	6	0	10	155	2	0	3	3	2	0	360	0
08:15 AM	0	121	34	0	17	2	3	4	1	173	3	0	8	3	4	0	369	4
08:30 AM	1	123	32	0	37	1	5	1	1	160	3	1	7	3	3	0	376	2
08:45 AM	3	97	39	0	48	0	5	0	3	159	2	0	2	1	2	0	361	0
04:00 PM	0	176	27	0	62	1	14	2	4	171	2	2	3	0	6	0	466	4
04:15 PM	1	192	34	2	46	2	6	0	3	170	1	1	7	1	2	0	465	3
04:30 PM	3	160	47	1	39	2	6	0	4	147	3	1	4	0	2	0	417	2
04:45 PM	4	184	54	0	68	3	10	0	11	165	0	2	4	4	4	1	511	3
05:00 PM	0	180	32	0	74	2	10	0	9	152	4	1	7	1	4	2	475	3
05:15 PM	4	151	30	0	75	7	9	1	5	141	6	0	8	1	3	0	440	1
05:30 PM	2	156	35	1	63	3	11	1	5	140	8	1	6	0	3	0	432	3
05:45 PM	3	155	43	1	60	4	10	0	5	154	1	0	4	3	3	2	445	3

Start Time	S MAIN ST (ROUTE 177) SOUTHBOUND				NEW BRITAIN AVE WESTBOUND				S MAIN ST (ROUTE 177) NORTHBOUND				RAILROAD AVE EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
AM PEAK	7:00 - 8:00 AM																	
	3	527	181	0	141	2	15	4	18	600	8	0	23	6	5	0	1529	4
PM PEAK	4:15 - 5:15 PM																	
	8	716	167	3	227	9	32	0	27	634	8	5	22	6	12	3	1868	11

File Name: 1338-16wXX.xls  
 Start Date: 10/27/2021  
 Start Time: 7:00:00 AM  
 Site Code: 16

Start Time	PLAINVILLE AVE (ROUTE 177) SOUTHBOUND				WESTBOUND				PLAINVILLE AVE (ROUTE 177) NORTHBOUND				WEBSTER ST EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
07:00 AM	6	101	0	0	0	0	0	0	0	159	2	0	16	0	13	0	297	0
07:15 AM	7	145	0	0	0	0	0	0	0	114	2	0	30	0	16	0	314	0
07:30 AM	12	137	0	0	0	0	0	0	0	137	4	0	22	0	11	0	323	0
07:45 AM	9	135	0	0	0	0	0	1	0	152	5	0	17	0	7	0	325	1
08:00 AM	8	113	0	0	0	0	0	0	0	167	3	0	16	0	11	0	318	0
08:15 AM	7	118	0	0	0	0	0	0	0	150	7	0	18	0	14	0	314	0
08:30 AM	23	118	0	0	0	0	0	0	0	147	4	0	15	0	9	0	316	0
08:45 AM	5	100	0	0	0	0	0	0	0	151	2	0	8	0	10	0	276	0
04:00 PM	13	171	0	0	0	0	0	0	0	167	18	0	5	0	6	1	380	1
04:15 PM	11	183	0	0	0	0	0	0	0	158	7	0	6	0	6	0	371	0
04:30 PM	13	154	0	0	0	0	0	0	0	171	15	0	13	0	9	1	375	1
04:45 PM	21	180	0	0	0	0	0	0	0	157	16	0	12	0	11	0	397	0
05:00 PM	15	171	0	0	0	0	0	2	0	138	16	0	9	0	6	0	355	2
05:15 PM	17	146	0	0	0	0	0	2	0	141	22	0	14	0	11	0	351	2
05:30 PM	22	141	0	0	0	0	0	0	0	147	14	0	7	0	10	0	341	0
05:45 PM	12	142	0	0	0	0	0	0	0	137	16	0	6	0	9	0	322	0

Start Time	PLAINVILLE AVE (ROUTE 177) SOUTHBOUND				WESTBOUND				PLAINVILLE AVE (ROUTE 177) NORTHBOUND				WEBSTER ST EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
AM PEAK	7:30 - 8:30 AM				0	0	0	1	0	606	19	0	73	0	43	0	1280	1
PM PEAK	4:00 - 5:00 PM				0	0	0	0	0	653	56	0	36	0	32	2	1523	2

File Name: 1338-17WXX.xls  
 Start Date: 11/3/2021  
 Start Time: 7:00:00 AM  
 Site Code: 17

Start Time	PLAINVILLE AVE (ROUTE 177) SOUTHBOUND				COPPERMINE RD WESTBOUND				PLAINVILLE AVE (ROUTE 177) NORTHBOUND				COPPERMINE RD EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
07:00 AM	12	144	5	0	7	6	5	0	2	68	2	0	16	12	36	0	315	0
07:15 AM	23	169	6	0	2	2	3	0	6	88	3	0	20	23	47	0	392	0
07:30 AM	33	183	5	0	1	8	3	0	5	85	3	0	16	23	47	0	412	0
07:45 AM	20	149	6	0	4	6	4	0	6	120	3	0	11	17	38	0	384	0
08:00 AM	16	143	11	0	3	8	8	0	6	98	8	0	19	17	34	0	371	0
08:15 AM	29	142	8	0	1	3	6	0	10	117	7	0	15	12	35	0	385	0
08:30 AM	28	153	15	0	6	5	18	0	17	119	11	0	7	23	47	0	449	0
08:45 AM	17	122	6	0	7	6	11	0	6	97	6	0	8	10	32	0	328	0
04:00 PM	51	102	7	0	10	15	8	0	8	167	24	0	19	15	22	0	448	0
04:15 PM	47	128	3	0	12	20	2	0	4	184	13	0	7	9	26	0	455	0
04:30 PM	34	113	4	0	7	23	9	0	5	177	16	0	4	7	40	0	439	0
04:45 PM	47	124	9	0	17	15	11	0	12	171	12	0	4	11	40	0	473	0
05:00 PM	46	124	7	0	11	18	7	0	11	168	20	0	9	7	27	0	455	0
05:15 PM	52	121	6	0	10	22	5	0	8	172	13	0	6	16	40	0	471	0
05:30 PM	45	111	5	0	4	18	5	0	8	168	16	0	12	20	22	0	434	0
05:45 PM	40	108	8	0	10	19	8	0	7	164	16	0	5	8	16	0	409	0

Start Time	PLAINVILLE AVE (ROUTE 177) SOUTHBOUND				COPPERMINE RD WESTBOUND				PLAINVILLE AVE (ROUTE 177) NORTHBOUND				COPPERMINE RD EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
AM PEAK	7:45 - 8:45 AM																	
	93	587	40	0	14	22	36	0	39	454	29	0	52	69	154	0	1589	0
PM PEAK	4:30 - 5:30 PM																	
	179	482	26	0	45	78	32	0	36	688	61	0	23	41	147	0	1838	0

File Name: 1338-18WXX.xls  
 Start Date: 11/3/2021  
 Start Time: 7:00:00 AM  
 Site Code: 18

Start Time	PLAINVILLE AVE (ROUTE 177) SOUTHBOUND				MEADOW RD WESTBOUND				PLAINVILLE AVE (ROUTE 177) NORTHBOUND				MOREA RD EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
07:00 AM	7	152	6	0	7	4	5	0	1	50	17	0	67	35	6	0	357	0
07:15 AM	4	192	9	0	1	4	3	0	9	94	22	0	62	34	5	0	439	0
07:30 AM	6	188	19	0	1	6	3	0	5	93	29	0	63	50	7	0	470	0
07:45 AM	5	153	16	0	12	14	2	0	8	112	19	0	69	45	14	0	469	0
08:00 AM	4	163	15	0	4	8	3	0	9	118	23	0	54	40	7	0	448	0
08:15 AM	3	166	21	0	6	7	5	0	7	122	19	0	50	42	11	0	459	0
08:30 AM	6	143	17	0	22	12	6	0	9	108	15	0	70	28	6	0	442	0
08:45 AM	2	156	4	0	6	14	4	0	7	94	16	0	51	36	6	0	396	0
04:00 PM	11	124	14	0	16	38	11	0	6	191	72	0	25	11	8	0	527	0
04:15 PM	8	113	13	0	27	46	8	0	5	198	65	0	35	24	6	0	548	0
04:30 PM	12	130	10	0	17	47	10	0	4	178	63	0	41	22	5	0	539	0
04:45 PM	9	120	13	0	13	52	6	0	9	192	77	0	32	25	3	0	551	0
05:00 PM	9	128	8	0	14	51	9	0	9	182	64	0	25	20	3	0	522	0
05:15 PM	16	120	3	0	12	53	11	0	6	193	71	0	35	16	8	0	544	0
05:30 PM	9	122	9	0	10	57	5	0	8	190	82	1	31	13	5	0	541	1
05:45 PM	10	107	7	0	7	32	13	0	9	176	77	0	25	20	12	0	495	0

Start Time	PLAINVILLE AVE (ROUTE 177) SOUTHBOUND				MEADOW RD WESTBOUND				PLAINVILLE AVE (ROUTE 177) NORTHBOUND				MOREA RD EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
AM PEAK	7:30 - 8:30 AM																	
	18	670	71	0	23	35	13	0	29	445	90	0	236	177	39	0	1846	0
PM PEAK	4:00 - 5:00 PM																	
	40	487	50	0	73	183	35	0	24	759	277	0	133	82	22	0	2165	0

File Name: 1338-19THREVISEDXX.xls

Start Date: 10/21/2021

Start Time: 7:00:00 AM

Site Code: 19

Start Time	PLAINVILLE AVE (ROUTE 177) SOUTHBOUND				SCOTT SWAMP RD (ROUTE 6) WESTBOUND				PLAINVILLE AVE (ROUTE 177) NORTHBOUND				SCOTT SWAMP RD (ROUTE 6) EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
07:00 AM	24	173	57	0	8	50	6	0	8	56	9	0	19	153	15	1	578	1
07:15 AM	15	156	58	0	12	57	4	0	17	65	13	0	23	180	20	1	620	1
07:30 AM	21	145	74	1	17	75	12	0	16	95	19	0	36	207	30	0	747	1
07:45 AM	24	203	52	0	23	96	20	0	22	84	15	1	33	172	22	1	766	2
08:00 AM	23	173	56	1	9	75	18	1	27	87	25	0	30	135	15	0	673	2
08:15 AM	17	161	50	0	17	53	23	0	21	102	22	0	35	128	33	2	662	2
08:30 AM	24	125	53	3	12	89	13	0	20	98	17	0	30	167	21	0	669	3
08:45 AM	29	146	54	0	11	87	23	2	27	92	37	0	26	106	21	2	659	4
04:00 PM	34	135	20	0	45	147	23	0	18	164	51	0	25	113	28	0	803	0
04:15 PM	32	108	25	1	58	164	19	0	18	156	42	0	23	109	36	0	790	1
04:30 PM	40	110	42	0	55	164	28	1	25	165	31	0	35	104	42	0	841	1
04:45 PM	37	127	27	0	42	162	32	0	17	173	39	0	40	95	34	0	825	0
05:00 PM	30	104	33	1	53	165	32	0	17	170	35	2	27	88	37	0	791	3
05:15 PM	28	116	37	0	70	167	30	0	13	162	24	0	27	117	38	0	829	0
05:30 PM	42	120	22	0	49	148	20	1	13	153	34	0	21	89	47	0	758	1
05:45 PM	35	83	28	0	53	145	18	0	16	142	31	0	17	104	47	0	719	0

Start Time	PLAINVILLE AVE (ROUTE 177) SOUTHBOUND				SCOTT SWAMP RD (ROUTE 6) WESTBOUND				PLAINVILLE AVE (ROUTE 177) NORTHBOUND				SCOTT SWAMP RD (ROUTE 6) EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
AM PEAK	7:30 - 8:30 AM				66	299	73	1	86	368	81	1	134	642	100	3	2848	7
PM PEAK	4:30 - 5:30 PM				220	658	122	1	72	670	129	2	129	404	151	0	3286	4

File Name: 1338-20THXX.xls  
 Start Date: 10/21/2021  
 Start Time: 7:00:00 AM  
 Site Code: 20

Start Time	UNIONVILLE AVE (ROUTE 177) SOUTHBOUND				NORTHWEST DR WESTBOUND				UNIONVILLE AVE (ROUTE 177) NORTHBOUND				NORTHWEST DR EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
07:00 AM	3	169	28	0	8	15	11	0	52	56	14	0	6	36	1	1	399	1
07:15 AM	12	161	35	0	13	23	8	0	36	84	26	0	7	30	5	0	440	0
07:30 AM	8	190	28	0	20	42	13	0	32	133	37	0	10	32	7	0	552	0
07:45 AM	13	210	32	0	5	28	8	0	58	103	42	0	26	63	5	0	593	0
08:00 AM	9	165	13	0	9	26	9	0	40	133	48	0	11	29	7	0	499	0
08:15 AM	12	133	25	0	14	17	9	0	23	136	32	0	23	27	8	0	459	0
08:30 AM	8	134	22	0	10	15	9	0	38	122	32	0	18	22	10	0	440	0
08:45 AM	4	153	18	0	18	20	10	0	14	122	21	0	17	18	5	0	420	0
04:00 PM	6	139	17	0	37	53	47	0	14	182	31	0	18	23	7	0	574	0
04:15 PM	6	143	26	0	41	42	44	0	13	207	18	0	20	19	7	0	586	0
04:30 PM	4	124	31	0	35	55	69	0	14	191	19	0	20	15	3	1	580	1
04:45 PM	3	159	20	0	28	41	35	0	14	243	29	0	10	19	13	0	614	0
05:00 PM	1	132	8	0	38	54	53	0	18	201	28	0	26	28	3	0	590	0
05:15 PM	6	143	17	0	15	30	24	0	10	209	28	0	23	27	5	0	537	0
05:30 PM	8	122	8	2	18	34	25	0	12	185	15	0	8	25	3	0	463	2
05:45 PM	4	101	20	0	17	25	32	0	15	178	17	0	9	25	7	0	450	0

Start Time	UNIONVILLE AVE (ROUTE 177) SOUTHBOUND				NORTHWEST DR WESTBOUND				UNIONVILLE AVE (ROUTE 177) NORTHBOUND				NORTHWEST DR EASTBOUND				ALL					
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS				
AM PEAK	7:30 - 8:30 AM				42	698	98	0	48	113	39	0	153	505	159	0	70	151	27	0	2103	0
PM PEAK	4:15 - 5:15 PM				14	558	85	0	142	192	201	0	59	842	94	0	76	81	26	1	2370	1

File Name: 1338-22THAMRXX.xls & 1338-22THPMRXX.xls

Start Date: 10/21/2021

Start Time: 7:00:00 AM

Site Code: 21

Start Time	NEW BRITAIN AVE SOUTHBOUND				RED OAK HILL RD WESTBOUND				NEW BRITAIN AVE NORTHBOUND				RED OAK HILL RD EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
07:00 AM	1	25	31	0	18	3	3	0	3	7	3	0	14	53	4	0	165	0
07:15 AM	0	29	41	0	10	8	0	0	2	11	1	0	18	61	2	0	183	0
07:30 AM	4	34	29	0	14	13	2	0	1	29	5	0	22	51	1	0	205	0
07:45 AM	3	33	31	0	17	22	2	0	0	18	7	0	15	48	4	0	200	0
08:00 AM	2	33	30	0	21	10	1	0	2	19	6	0	11	27	1	0	163	0
08:15 AM	2	28	26	0	12	15	1	0	2	21	12	0	21	35	2	0	177	0
08:30 AM	0	29	24	0	15	13	2	0	7	25	17	0	10	38	2	0	182	0
08:45 AM	4	22	13	0	26	14	0	0	2	24	4	0	9	24	3	1	145	1
04:00 PM	3	18	23	0	37	30	1	0	2	32	18	0	3	21	3	0	191	0
04:15 PM	0	14	27	0	31	39	3	0	5	40	26	0	7	32	3	0	227	0
04:30 PM	1	23	47	0	38	39	2	0	5	47	24	0	16	31	1	0	274	0
04:45 PM	0	21	37	0	36	43	9	0	7	29	35	0	12	47	2	0	278	0
05:00 PM	2	27	47	0	30	46	9	0	6	49	30	0	11	34	4	0	295	0
05:15 PM	2	27	28	0	29	53	4	0	3	57	32	0	3	27	2	0	267	0
05:30 PM	5	22	22	0	26	43	3	0	4	34	30	0	9	27	1	0	226	0
05:45 PM	4	20	20	0	22	40	4	0	4	30	28	0	8	25	1	0	206	0

Start Time	NEW BRITAIN AVE SOUTHBOUND				RED OAK HILL RD WESTBOUND				NEW BRITAIN AVE NORTHBOUND				RED OAK HILL RD EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
AM PEAK	7:00 - 8:00 AM																	
	8	121	132	0	59	46	7	0	6	65	16	0	69	213	11	0	753	0
PM PEAK	4:30 - 5:30 PM																	
	5	98	159	0	133	181	24	0	21	182	121	0	42	139	9	0	1114	0

File Name: 1338-21THXX.xls  
 Start Date: 10/21/2021  
 Start Time: 7:00:00 AM  
 Site Code: 22

Start Time	NEW BRITAIN AVE SOUTHBOUND				MEADOW RD WESTBOUND				NEW BRITAIN AVE NORTHBOUND				MEADOW RD EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
07:00 AM	5	33	0	0	0	8	3	0	0	8	1	0	17	26	3	0	104	0
07:15 AM	4	44	0	0	0	4	0	2	1	11	3	0	20	26	4	1	117	3
07:30 AM	9	49	0	0	0	8	3	0	1	29	1	0	22	52	6	1	180	1
07:45 AM	9	39	0	0	0	8	3	1	1	25	9	0	26	39	4	1	163	2
08:00 AM	5	37	0	0	0	10	5	0	4	25	6	0	18	21	5	1	136	1
08:15 AM	13	47	0	0	0	15	3	0	3	34	6	0	18	36	8	0	183	0
08:30 AM	12	40	0	0	0	20	6	0	0	24	8	0	18	57	32	0	217	0
08:45 AM	4	40	0	2	0	14	7	0	0	18	6	1	17	33	12	0	151	3
04:00 PM	9	15	0	0	0	33	3	1	1	54	27	2	11	17	10	2	180	5
04:15 PM	7	17	1	2	0	31	6	4	5	69	30	2	14	17	16	3	213	11
04:30 PM	6	30	0	1	1	19	3	4	2	76	33	3	6	28	26	3	230	11
04:45 PM	15	32	0	0	1	31	1	6	4	71	25	6	12	24	18	3	234	15
05:00 PM	12	37	2	0	3	39	4	2	4	75	35	2	16	21	11	0	259	4
05:15 PM	9	25	0	0	6	34	1	5	4	81	27	3	15	21	10	2	233	10
05:30 PM	8	26	0	0	0	22	2	8	5	63	23	7	6	18	17	0	190	15
05:45 PM	13	23	0	0	1	19	2	5	6	52	19	4	11	22	15	1	183	10

Start Time	NEW BRITAIN AVE SOUTHBOUND				MEADOW RD WESTBOUND				NEW BRITAIN AVE NORTHBOUND				MEADOW RD EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
AM PEAK	7:45 - 8:45 AM																	
	39	163	0	0	0	53	17	1	8	108	29	0	80	153	49	2	699	3
PM PEAK	4:30 - 5:30 PM																	
	42	124	2	1	11	123	9	17	14	303	120	14	49	94	65	8	956	40

File Name: 1338-23thXX.xls  
 Start Date: 10/21/2021  
 Start Time: 7:00:00 AM  
 Site Code: 23

Start Time	NEW BRITAIN AVE SOUTHBOUND				SCOTT SWAMP RD (ROUTE 6) WESTBOUND				NEW BRITAIN AVE NORTHBOUND				SCOTT SWAMP RD (ROUTE 6) EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
07:00 AM	6	19	25	0	13	61	1	0	2	4	5	0	2	212	4	0	354	0
07:15 AM	6	13	43	0	24	78	4	0	1	3	1	0	2	219	6	0	400	0
07:30 AM	3	17	41	0	26	113	4	0	2	11	2	0	1	229	7	0	456	0
07:45 AM	5	21	42	0	27	166	2	0	4	8	2	0	7	243	4	0	531	0
08:00 AM	7	18	23	0	25	97	3	0	2	8	3	0	5	176	6	0	373	0
08:15 AM	6	15	45	0	26	124	4	0	2	12	7	0	4	170	6	0	421	0
08:30 AM	10	14	36	0	40	118	4	0	4	8	6	0	10	218	8	0	476	0
08:45 AM	12	10	43	0	22	110	2	0	5	11	2	0	3	211	7	0	438	0
04:00 PM	4	13	21	0	64	215	2	0	0	17	8	0	3	140	5	0	492	0
04:15 PM	11	14	22	0	65	238	2	1	3	18	4	0	6	151	6	0	540	1
04:30 PM	1	20	37	0	88	236	6	0	5	24	10	0	5	178	7	0	617	0
04:45 PM	5	24	26	0	66	216	4	0	3	30	4	0	6	165	5	0	554	0
05:00 PM	11	27	52	0	87	248	2	0	5	23	3	0	5	155	12	0	630	0
05:15 PM	11	14	32	0	75	232	5	0	2	20	5	0	7	147	5	0	555	0
05:30 PM	2	17	17	0	68	184	3	1	4	14	4	0	2	135	4	0	454	1
05:45 PM	6	15	31	0	42	181	1	0	2	17	7	0	1	133	6	0	442	0

Start Time	NEW BRITAIN AVE SOUTHBOUND				SCOTT SWAMP RD (ROUTE 6) WESTBOUND				NEW BRITAIN AVE NORTHBOUND				SCOTT SWAMP RD (ROUTE 6) EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
AM PEAK	7:45 - 8:45 AM																	
	28	68	146	0	118	505	13	0	12	36	18	0	26	807	24	0	1801	0
PM PEAK	4:30 - 5:30 PM																	
	28	85	147	0	316	932	17	0	15	97	22	0	23	645	29	0	2356	0

File Name: 1338-24THXX.xls  
 Start Date: 10/21/2021  
 Start Time: 7:00:00 AM  
 Site Code: 24

Start Time	HYDE RD SOUTHBOUND				SCOTT SWAMP RD (ROUTE 6) WESTBOUND				HYDE RD NORTHBOUND				SCOTT SWAMP RD EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
07:00 AM	0	0	0	0	1	75	31	0	9	0	1	0	3	260	1	0	381	0
07:15 AM	0	0	0	0	2	111	20	0	13	0	2	1	0	265	2	0	415	1
07:30 AM	0	0	0	0	3	150	24	0	9	0	2	0	4	280	4	0	476	0
07:45 AM	0	0	0	0	3	187	49	0	9	2	0	0	3	278	3	0	534	0
08:00 AM	1	0	0	0	6	133	33	0	11	1	0	0	1	195	3	0	384	0
08:15 AM	0	1	1	0	0	158	25	0	9	2	2	0	3	229	0	0	430	0
08:30 AM	0	0	0	0	0	146	32	0	15	0	3	0	1	246	1	0	444	0
08:45 AM	0	0	0	0	1	134	17	0	8	0	1	0	3	252	0	0	416	0
04:00 PM	1	0	6	0	0	270	12	0	39	0	3	0	0	160	0	0	491	0
04:15 PM	2	0	2	0	0	284	17	0	23	0	3	0	2	179	0	0	512	0
04:30 PM	0	0	1	0	1	320	37	0	58	0	8	0	8	216	0	0	649	0
04:45 PM	2	0	1	0	1	284	41	0	30	0	3	0	8	192	1	0	563	0
05:00 PM	7	4	6	0	0	312	16	0	56	0	2	0	3	203	1	0	610	0
05:15 PM	0	1	2	0	0	302	21	0	31	0	0	0	3	184	0	0	544	0
05:30 PM	2	1	1	0	0	262	17	0	18	0	1	0	1	146	0	0	449	0
05:45 PM	0	0	0	0	0	226	25	0	24	0	2	0	4	163	0	0	444	0

Start Time	HYDE RD SOUTHBOUND				SCOTT SWAMP RD (ROUTE 6) WESTBOUND				HYDE RD NORTHBOUND				SCOTT SWAMP RD EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
AM PEAK	7:30 - 8:30 AM				12	628	131	0	38	5	4	0	11	982	10	0	1824	0
PM PEAK	4:30 - 5:30 PM				2	1218	115	0	175	0	13	0	22	795	2	0	2366	0

File Name: 1338-25THXX.xls  
 Start Date: 10/21/2021  
 Start Time: 7:00:00 AM  
 Site Code: 25

Start Time	SOUTHBOUND				COLT HIGHWAY (ROUTE 6) WESTBOUND				SCOTT SWAMP RD (ROUTE 552) NORTHBOUND				SCOTT SWAMP RD (ROUTE 6) EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
07:00 AM	0	0	0	0	0	86	14	0	8	0	23	0	47	214	0	0	392	0
07:15 AM	0	0	0	0	0	106	13	0	8	0	27	1	36	240	0	0	430	1
07:30 AM	0	0	0	0	0	147	17	0	3	0	42	0	33	286	0	0	528	0
07:45 AM	0	0	0	0	0	186	23	0	2	0	36	0	54	270	0	0	571	0
08:00 AM	0	0	0	0	0	133	20	0	7	0	42	0	29	173	0	0	404	0
08:15 AM	0	0	0	0	0	137	26	0	2	0	36	0	52	192	0	0	445	0
08:30 AM	0	0	0	0	0	131	21	0	9	0	42	0	57	215	0	0	475	0
08:45 AM	0	0	0	0	0	117	26	0	5	0	39	0	49	224	0	0	460	0
04:00 PM	0	0	0	0	0	231	35	0	8	0	57	0	62	154	0	0	547	0
04:15 PM	0	0	0	0	0	223	54	0	14	0	62	0	52	148	0	0	553	0
04:30 PM	0	0	0	0	0	271	37	0	12	0	76	0	69	206	0	0	671	0
04:45 PM	0	0	0	0	0	254	54	0	5	0	70	0	71	150	0	0	604	0
05:00 PM	0	0	0	0	0	238	30	0	9	0	76	0	82	186	0	0	621	0
05:15 PM	0	0	0	0	0	258	37	0	9	0	52	0	55	165	0	0	576	0
05:30 PM	0	0	0	0	0	211	47	0	7	0	57	0	40	118	0	0	480	0
05:45 PM	0	0	0	0	0	194	33	0	9	0	54	0	54	134	0	0	478	0

Start Time	SOUTHBOUND				COLT HIGHWAY (ROUTE 6) WESTBOUND				SCOTT SWAMP RD (ROUTE 552) NORTHBOUND				SCOTT SWAMP RD (ROUTE 6) EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
AM PEAK	7:30 - 8:30 AM				0	603	86	0	14	0	156	0	168	921	0	0	1948	0
PM PEAK	4:30 - 5:30 PM				0	1021	158	0	35	0	274	0	277	707	0	0	2472	0

File Name: 1338-26tuXX.xls  
 Start Date: 10/19/2021  
 Start Time: 7:00:00 AM  
 Site Code: 26

Start Time	MAIN ST (ROUTE 10) SOUTHBOUND				WESTBOUND				MAIN ST (ROUTE 10) NORTHBOUND				MEADOW RD EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
07:00 AM	17	41	0	0	0	0	0	0	0	68	7	0	23	0	65	0	221	0
07:15 AM	11	51	0	0	0	0	0	0	0	61	10	0	27	0	97	2	257	2
07:30 AM	20	62	0	0	0	0	0	0	0	87	21	0	18	0	124	0	332	0
07:45 AM	29	66	0	0	0	0	0	0	0	79	21	0	34	0	71	1	300	1
08:00 AM	25	58	0	0	0	0	0	0	0	75	18	0	12	0	65	2	253	2
08:15 AM	31	51	0	0	0	0	0	0	0	102	17	0	27	0	80	0	308	0
08:30 AM	36	75	0	0	0	0	0	0	0	88	13	0	17	0	74	0	303	0
08:45 AM	32	83	0	0	0	0	0	0	0	79	25	0	20	0	63	0	302	0
04:00 PM	71	93	0	0	0	0	0	2	0	89	42	0	28	0	35	0	358	2
04:15 PM	53	117	0	0	0	0	0	1	0	81	42	0	28	0	42	1	363	2
04:30 PM	58	122	0	0	0	0	0	0	0	76	52	0	26	0	32	1	366	1
04:45 PM	65	125	0	0	0	0	0	1	0	75	40	0	42	0	39	0	386	1
05:00 PM	50	115	0	0	0	0	0	0	0	86	45	0	40	0	50	2	386	2
05:15 PM	50	100	0	0	0	0	0	0	0	77	46	0	40	0	34	6	347	6
05:30 PM	61	99	0	0	0	0	0	0	0	99	54	1	35	0	26	1	374	2
05:45 PM	51	85	0	2	0	0	0	0	0	87	51	0	29	0	39	4	342	6

Start Time	MAIN ST (ROUTE 10) SOUTHBOUND				WESTBOUND				MAIN ST (ROUTE 10) NORTHBOUND				MEADOW RD EASTBOUND				ALL	
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	VEH	PEDS
AM PEAK	7:30 - 8:30 AM				0	0	0	0	0	343	77	0	91	0	340	3	1193	3
PM PEAK	4:15 - 5:15 PM				0	0	0	2	0	318	179	0	136	0	163	4	1501	6



# Appendix B LOS Designation Descriptions

## Farmington Area Connectivity Study

Capitol Region Council of Governments and Town of Farmington

SLR Project No.: 141.12020.00019

January 16, 2024

# LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS (MOTORIZED VEHICLE MODE)

Level of service for signalized intersections is defined in terms of control delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions: in the absence of traffic control, geometric delay, any incidents, and any other vehicles. Specifically, LOS criteria for traffic signals are stated in terms of the average control delay per vehicle, typically for a 15-min analysis period. Delay is a complex measure and depends on a number of variables, including the quality of progression, the cycle length, the green ratio, and the v/c ratio for the lane group. The criteria are given below.

<b>LEVEL-OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS MOTORIZED VEHICLE MODE</b>		
<b>LOS By Volume-to-Capacity Ratio<sup>1</sup></b>		<b>CONTROL DELAY (s/veh)</b>
<b>v/c ≤ 1.0</b>	<b>v/c &gt; 1.0</b>	
<b>A</b>	<b>F</b>	<b>≤ 10</b>
<b>B</b>	<b>F</b>	<b>&gt; 10 AND ≤ 20</b>
<b>C</b>	<b>F</b>	<b>&gt; 20 AND ≤ 35</b>
<b>D</b>	<b>F</b>	<b>&gt; 35 AND ≤ 55</b>
<b>E</b>	<b>F</b>	<b>&gt; 55 AND ≤ 80</b>
<b>F</b>	<b>F</b>	<b>&gt; 80</b>

<sup>1</sup> For approach-based and intersection-wide assessments, LOS is defined solely by control delay.

Specific descriptions of each LOS for signalized intersections are provided below:

**Level of Service A** describes operations with a control delay of 10 s/veh and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If LOS A is the result of favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

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

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

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

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

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

Reference: Highway Capacity Manual 6, Transportation Research Board, 2016.

# LEVEL OF SERVICE FOR UNSIGNALIZED INTERSECTIONS ALL-WAY STOP-CONTROL (AWSC)

The criteria for AWSC intersections have different threshold values than do those for signalized intersections primarily because drivers expect different levels of performance from distinct types of transportation facilities. The expectation is that a signalized intersection is designed to carry higher traffic volumes than an AWSC intersection. Thus a higher level of control delay is acceptable at a signalized intersection for the same LOS. The level-of-service criteria are given below.

<b>LEVEL-OF SERVICE CRITERIA FOR AWSC INTERSECTIONS</b>	
<b>LOS<sup>1</sup></b>	<b>CONTROL DELAY (s/veh)</b>
<b>A</b>	<b><math>\leq 10</math></b>
<b>B</b>	<b><math>&gt; 10 \text{ AND } \leq 15</math></b>
<b>C</b>	<b><math>&gt; 15 \text{ AND } \leq 25</math></b>
<b>D</b>	<b><math>&gt; 25 \text{ AND } \leq 35</math></b>
<b>E</b>	<b><math>&gt; 35 \text{ AND } \leq 50</math></b>
<b>F</b>	<b><math>&gt; 50</math></b>

<sup>1</sup> For approaches and intersection-wide assessment, LOS is defined solely by control delay.

Note: LOS F is assigned to a movement if the volume-to-capacity ratio exceeds 1.0, regardless of the control delay.

Reference: Highway Capacity Manual Version 6.0, Transportation Research Board, 2016.

# LEVEL OF SERVICE

## FOR TWO-WAY

### STOP SIGN CONTROLLED INTERSECTIONS

The level of service for a TWSC (two-way stop controlled) intersection is determined by the computed or measured control delay and is defined for each minor movement. Level of service is not defined for the intersection as a whole. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. LOS criteria are given in the Table. LOS criteria are given below:

<b>LEVEL-OF SERVICE CRITERIA FOR AWSC INTERSECTIONS</b>	
<b>LOS<sup>1</sup></b>	<b>CONTROL DELAY (s/veh)</b>
<b>A</b>	<b><math>\leq 10</math></b>
<b>B</b>	<b><math>&gt; 10</math> AND <math>\leq 15</math></b>
<b>C</b>	<b><math>&gt; 15</math> AND <math>\leq 25</math></b>
<b>D</b>	<b><math>&gt; 25</math> AND <math>\leq 35</math></b>
<b>E</b>	<b><math>&gt; 35</math> AND <math>\leq 50</math></b>
<b>F</b>	<b><math>&gt; 50</math></b>

Note: LOS criteria apply to each lane on a given approach and to each approach on the minor street.  
 LOS is not calculated for major-street approaches or for the intersection as a whole.  
 LOS F is assigned to a movement if the volume-to-capacity ratio exceeds 1.0, regardless of the control delay

Reference: Highway Capacity Manual Version 6.0, Transportation Research Board, 2016.



# **Appendix C Existing (2021) Conditions *Synchro* Analysis Worksheets**

## **Farmington Area Connectivity Study**

**Capitol Region Council of Governments and Town of Farmington**

SLR Project No.: 141.12020.00019

January 16, 2024

INTERSECTION/LANE GROUP	AVAILABLE STORAGE LENGTH	QUEUE LENGTH (FEET)			
		A.M. PEAK HOUR		P.M. PEAK HOUR	
		AVERAGE	95TH PERCENTILE	AVERAGE	95TH PERCENTILE
<b>SIGNALIZED</b>					
<b>1: Canton Rd (RT 179) &amp; Spielman Hwy (RT 4)</b>					
Eastbound Left	260'	66	155	92	159
Eastbound Right	-	0	51	0	51
Northbound Left/Through	-	38	105	~295	#790
Southbound Through/Right	-	86	194	131	268
<b>3: S Main St (RT 177)/Lovely St (RT 177) &amp; School St/Farmington Ave (RT 4) &amp; Main St (RT 4)</b>					
Eastbound Left/Through/Right	-	17	48	12	34
Westbound Left/Through	-	107	#274	186	#452
Westbound Right	300'	73	211	174	412
Northbound Left	-	56	146	82	#193
Northbound Through	-	110	256	151	304
Southbound Left	110'	47	125	45	#116
Southbound Through	-	135	#325	~255	#565
Southeastbound Left	-	214	#589	195	#445
Southeastbound Right	255'	79	207	82	180
<b>4: Farmington Ave (RT 4) &amp; W Avon Rd (RT 167)</b>					
Eastbound Left	365'	16	105	25	60
Eastbound Through	-	68	400	92	195
Westbound Through/Right	-	82	333	207	399
Southbound Left/Right	-	20	122	65	198
<b>5: Farmington Ave (RT 4) &amp; Monteith Dr</b>					
Eastbound Left/Through	-	~809	#819	109	213
Westbound Through/Right	-	307	375	101	184
Southbound Left	-	145	167	60	106
Southbound Right	-	0	26	0	46
<b>6: Bridgewater Rd/Brickyard Rd &amp; Farmington Ave (RT 4)</b>					
Eastbound Left	90'	8	36	13	52
Eastbound Through/Right	-	306.0	#834	305	#826
Westbound Left	90'	8	36	6	31
Westbound Through	-	255	#718	255	#740
Westbound Right	90'	0	46	17	105
Northbound Left	-	3	13	14	34
Northbound Through/Right	-	1	24	11	49
Southbound Left	150'	~239	#345	190	#273
Southbound Through/Right	-	6	42	8	53

INTERSECTION/LANE GROUP	AVAILABLE STORAGE LENGTH	QUEUE LENGTH (FEET)			
		A.M. PEAK HOUR		P.M. PEAK HOUR	
		AVERAGE	95TH PERCENTILE	AVERAGE	95TH PERCENTILE
<b>7: Garden St &amp; Farmington Ave (RT 4)</b>					
Eastbound Through/Right	-	162	433	154	440
Westbound Left	200'	0	m2	0	m1
Westbound Through	-	24	m164	13	267
Northbound Left/Right	-	148	221	112	177
<b>8: Main St/Waterville Rd (RT 10) &amp; Farmington Ave (RT 4)</b>					
Eastbound Left	100'	4	m4	0	m1
Eastbound Through	-	461	#666	360	#586
Eastbound Right	150'	68	m73	137	241
Westbound Left	255'	24	m32	41	73
Westbound Through/Right	-	615	#1079	566	#1079
Northbound Left	100'	91	148	148	#232
Norhtbound Through	-	136	205	102	167
Northbound Right	50'	117	175	53	97
Southbound Left/Through/Right	-	305	409	314	#553
<b>9: High St/Backage Rd &amp; Farmington Ave (RT 4)</b>					
Eastbound Left	85'	1	m1	1	m1
Eastbound Through/Right	-	150	141	282	170
Westbound Left	115'	2	13	5	34
Westbound Through/Right	-	142	602	141	720
Northbound Left/Through	-	29	56	59	103
Norhtbound Right	85'	0	70	0	40
Southbound Left/Through/Right	-	4	20	8	28
<b>10: W Avon Rd (RT 167) &amp; Sycamore Hills Rd/Scoville Rd</b>					
Eastbound Left/Through/Right	-	2	15	4	32
Westbound Left/Through/Right	-	28	101	16	95
Northbound Left/Through/Right	-	171	478	112	362
Southbound Left/Through/Right	-	74	339	66	379
<b>13: Stafford Ave &amp; Stevens St</b>					
Eastbound Left/Through/Right	-	157	277	92	154
Westbound Left/Through/Right	-	63	127	164	260
Northbound Left/Through/Right	-	121	190	~275	#454
Southbound Left/Through/Right	-	139	210	118	193

INTERSECTION/LANE GROUP	AVAILABLE STORAGE LENGTH	QUEUE LENGTH (FEET)			
		A.M. PEAK HOUR		P.M. PEAK HOUR	
		AVERAGE	95TH PERCENTILE	AVERAGE	95TH PERCENTILE
<b>14: S Main St (RT 177) &amp; Mill St</b>					
Eastbound Left/Through	-	14	51	33	71
Eastbound Right	95'	18	40	35	70
Westbound Left/Through	-	19	66	69	128
Westbound Right	100'	3	18	15	40
Northbound Left	60'	4	34	13	31
Northbound Through/Right	-	76	457	180	347
Southbound Left	-	0	7	6	20
Southbound Through/Right	-	151	#611	311	#589
<b>15: S Main St (RT 177) &amp; Railroad Ave/New Britain Ave</b>					
Eastbound Left/Through/Right	-	9	55	15	75
Westbound Left/Through	-	5	33	15	76
Westbound Right	200'	31	104	59	#230
Northbound Left	80'	1	12	2	13
Northbound Through/Right	-	127	481	226	609
Southbound Left	120'	13	85	14	95
Southbound Through/Right	-	48	276	92	470
<b>17: Plainville Ave (RT 177) &amp; Coopermine Rd</b>					
Eastbound Left/Through/Right	-	175	265	119	201
Westbound Left/Through/Right	-	34	70	70	127
Northbound Left/Through/Right	-	187	356	280	590
Southbound Left/Through/Right	-	317	604	206	430
<b>18: Plainville Ave (RT 177) &amp; Morea Rd/Meadow Rd</b>					
Eastbound Left/Through/Right	-	264	#591	117	236
Westbound Left/Through/Right	-	23	70	142	282
Northbound Left	250'	22	41	58	116
Northbound Through/Right	-	208	305	363	633
Southbound Left	80'	17	33	9	26
Southbound Through/Right	-	372	554	234	405
<b>19: Plainville Ave (RT 177) &amp; Scott Swamp Rd (US 6)</b>					
Eastbound Left	260'	80	#231	126	#255
Eastbound Through	-	~572	#1151	296	#662
Eastbound Right	260'	19	88	7	70
Westbound Left	180'	57	#154	102	207
Westbound Through/Right	-	108	214	356	#712
Northbound Left	250'	36	99	62	154
Northbound Through	-	271	#580	~619	#1218
Northbound Right	250'	2	29	3	24
Southbound Left	165'	114	#351	67	#267
Southbound Through/Right	-	274	#557	201	392

INTERSECTION/LANE GROUP	AVAILABLE STORAGE LENGTH	QUEUE LENGTH (FEET)			
		A.M. PEAK HOUR		P.M. PEAK HOUR	
		AVERAGE	95TH PERCENTILE	AVERAGE	95TH PERCENTILE
<b>20: Unionville Ave (RT 177) &amp; Northwest Dr</b>					
Eastbound Left	-	9	25	8	36
Eastbound Through/Right	-	103	180	59	184
Westbound Left	-	14	33	68	196
Westbound Through/Right	-	58	130	120	#391
Northbound Left	210'	43	79	21	105
Northbound Through/Right	-	148	218	205	#680
Southbound Left	260'	25	51	19	96
Southbound Through/Right	-	185	254	115	#401
<b>23: New Britain Ave &amp; Scott Swamp Rd (US 6)</b>					
Eastbound Left	340'	14	36	15	40
Eastbound Through/Right	-	133	269	99	224
Westbound Left	100'	7	25	9	m15
Westbound Through	-	54	176	122	#380
Westbound Right	320'	0	61	31	163
Northbound Left	190'	10	29	11	31
Northbound Through/Right	-	20	50	54	102
Southbound Left	120'	42	64	38	63
Southbound Through/Right	-	44	82	49	96
<b>24: Hyde Rd &amp; Scott Swamp Rd (US 6)</b>					
Eastbound Left	130'	6	m15	0	m3
Eastbound Through/Right	-	21	43	165	10
Westbound Left	360'	75	127	56	100
Westbound Through/Right	-	0	116	67	177
Northbound Left/Through	-	5	20	7	24
Northbound Right	-	0	20	34	79
Southbound Left/Through	-	1	7	8	26
Southbound Right	-	0	0	0	0
<b>25: Scott Swamp Rd (RT 552) &amp; Scott Swamp Rd (US 6)/Colt Hwy (US 6)</b>					
Eastbound Through	-	210	53	86	196
Eastbound Right	350'	58	20	27	23
Westbound Left	350'	48	88	81	#171
Westbound Through	-	40	53	90	140
Northbound Left/Right	-	49	76	82	120
<b>26: Main St (RT 10) &amp; Meadow Rd</b>					
Eastbound Left/Right	-	160	#564	128	292
Northbound Left/Through	-	140	#462	~269	#743
Southbound Left/Right	-	150	342	289	#907

INTERSECTION/LANE GROUP	AVAILABLE STORAGE LENGTH	QUEUE LENGTH (FEET)			
		A.M. PEAK HOUR		P.M. PEAK HOUR	
		AVERAGE	95TH PERCENTILE	AVERAGE	95TH PERCENTILE
<b>UN SIGNALIZED</b>					
<b>2: River Road &amp; Collinsville Rd (RT 4)</b>					
Northbound Left	-		20		83
Northbound Right	60'		15		13
Westbound Left	-		5		8
<b>11: Harris Rd/W Avon Rd (RT 167) &amp; W Avon Rd (RT 167)</b>					
Eastbound Left/Right	-		50		65
Northbound Left/Through	-		98		50
Southbound Through/Right	-		98		305
<b>12: Burlington Rd &amp; River Rd</b>					
Eastbound Left	-		5		10
Southbound Left/Right	-		13		30
<b>16: S Main St (RT 177) &amp; Webster St</b>					
Northbound Left	-		3		5
Eastbound Left/Right	-		40		43
<b>21: New Britain Ave &amp; Red Oak Hill Rd</b>					
Eastbound Left/Through/Right	-		13		105
Westbound Left/Through/Right	-		58		45
Northbound Left/Through/Right	-		15		108
Southbound Left/Through/Right	-		53		75
<b>22: New Britain Ave &amp; Meadow Rd</b>					
Eastbound Left/Through/Right	-		28		153
Westbound Left/Through/Right	-		70		43
Northbound Left/Through/Right	-		13		28
Southbound Left/Through/Right	-		43		30

Notes: Queue calculations were performed using *Synchro 11* .

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

~ = Volume exceeds capacity, queue is theroretically infinite

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

Farmington Connectivity Study  
 1: Canton Rd (RT 179) & Spielman Hwy (RT 4)

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	223	395	171	166	269	138
Future Volume (vph)	223	395	171	166	269	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98				
Frt		0.850			0.954	
Flt Protected	0.950			0.975		
Satd. Flow (prot)	1770	1583	0	1816	1777	0
Flt Permitted	0.950			0.629		
Satd. Flow (perm)	1770	1547	0	1172	1777	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		411			41	
Link Speed (mph)	35			50	50	
Link Distance (ft)	986			565	665	
Travel Time (s)	19.2			7.7	9.1	
Confl. Peds. (#/hr)		1				
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	232	411	178	173	280	144
Shared Lane Traffic (%)						
Lane Group Flow (vph)	232	411	0	351	424	0
Number of Detectors	1	1	1	1	1	
Detector Template			Left			
Leading Detector (ft)	40	40	20	40	40	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	40	40	20	40	40	
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	pm+ov	D.P+P	NA	NA	
Protected Phases	4	1	1	12	2	
Permitted Phases		4	2			
Detector Phase	4	1	1	2	2	
Switch Phase						
Minimum Initial (s)	6.0	6.0	6.0		20.0	
Minimum Split (s)	17.0	10.0	10.0		26.6	
Total Split (s)	29.0	10.0	10.0		46.6	
Total Split (%)	33.9%	11.7%	11.7%		54.4%	
Maximum Green (s)	25.0	6.0	6.0		40.0	
Yellow Time (s)	3.0	3.0	3.0		5.0	
All-Red Time (s)	1.0	1.0	1.0		1.6	
Lost Time Adjust (s)	0.0	0.0			0.0	
Total Lost Time (s)	4.0	4.0			6.6	

Farmington Connectivity Study  
 1: Canton Rd (RT 179) & Spielman Hwy (RT 4)

Existing Conditions  
 AM PEAK



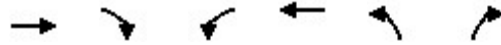
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	1.0	3.0	3.0		5.0	
Recall Mode	None	Min	Min		Min	
Walk Time (s)	12.0					
Flash Dont Walk (s)	1.0					
Pedestrian Calls (#/hr)	1					
Act Effct Green (s)	11.1	17.3		32.6	23.8	
Actuated g/C Ratio	0.20	0.31		0.58	0.42	
v/c Ratio	0.66	0.54		0.47	0.55	
Control Delay	31.0	4.6		7.8	14.4	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	31.0	4.6		7.8	14.4	
LOS	C	A		A	B	
Approach Delay	14.1			7.8	14.4	
Approach LOS	B			A	B	
Queue Length 50th (ft)	66	0		38	86	
Queue Length 95th (ft)	155	51		105	194	
Internal Link Dist (ft)	906			485	585	
Turn Bay Length (ft)	260					
Base Capacity (vph)	810	765		1064	1312	
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	0.29	0.54		0.33	0.32	

Intersection Summary

Area Type:	Other
Cycle Length:	85.6
Actuated Cycle Length:	56.1
Natural Cycle:	55
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.66
Intersection Signal Delay:	12.7
Intersection LOS:	B
Intersection Capacity Utilization:	65.3%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 1: Canton Rd (RT 179) & Spielman Hwy (RT 4)





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	485	77	68	286	51	91
Future Volume (vph)	485	77	68	286	51	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	60
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.982					0.850
Flt Protected				0.991	0.950	
Satd. Flow (prot)	1811	0	0	1828	1752	1568
Flt Permitted				0.991	0.950	
Satd. Flow (perm)	1811	0	0	1828	1752	1568
Link Speed (mph)	30			30	25	
Link Distance (ft)	740			816	860	
Travel Time (s)	16.8			18.5	23.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	500	79	70	295	53	94
Shared Lane Traffic (%)						
Lane Group Flow (vph)	579	0	0	365	53	94
Sign Control	Free			Free	Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	62.3%
Analysis Period (min)	15
	ICU Level of Service B



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	485	77	68	286	51	91
Future Volume (Veh/h)	485	77	68	286	51	91
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	500	79	70	295	53	94
<b>Pedestrians</b>						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type	None		None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			579		974	540
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			579		974	540
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		79	83
cM capacity (veh/h)			990		258	540
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>NB 1</b>			
Volume Total	579	365	147			
Volume Left	0	70	53			
Volume Right	79	0	94			
cSH	1700	990	716			
Volume to Capacity	0.34	0.07	0.21			
Queue Length 95th (ft)	0	6	19			
Control Delay (s)	0.0	2.3	16.5			
Lane LOS			A	C		
Approach Delay (s)	0.0	2.3	16.5			
Approach LOS			C			
<b>Intersection Summary</b>						
Average Delay			3.0			
Intersection Capacity Utilization			62.3%	ICU Level of Service		B
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	2.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	485	77	68	286	51	91
Future Vol, veh/h	485	77	68	286	51	91
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	60
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	500	79	70	295	53	94

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	579	0	975
Stage 1	-	-	-	-	540
Stage 2	-	-	-	-	435
Critical Hdwy	-	-	4.13	-	6.43
Critical Hdwy Stg 1	-	-	-	-	5.43
Critical Hdwy Stg 2	-	-	-	-	5.43
Follow-up Hdwy	-	-	2.227	-	3.527
Pot Cap-1 Maneuver	-	-	990	-	278
Stage 1	-	-	-	-	582
Stage 2	-	-	-	-	650
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	990	-	254
Mov Cap-2 Maneuver	-	-	-	-	254
Stage 1	-	-	-	-	582
Stage 2	-	-	-	-	595

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	16.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	254	540	-	-	990	-
HCM Lane V/C Ratio	0.207	0.174	-	-	0.071	-
HCM Control Delay (s)	22.8	13.1	-	-	8.9	0
HCM Lane LOS	C	B	-	-	A	A
HCM 95th %tile Q(veh)	0.8	0.6	-	-	0.2	-

Farmington Connectivity Study

Existing Conditions

3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



Lane Group	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↑↑			↑	↑			↑	↑	↑	↑	↑
Traffic Volume (vph)	50	22	163	32	217	40	9	122	242	263	87	226
Future Volume (vph)	50	22	163	32	217	40	9	122	242	263	87	226
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		50	0		0			0		145	110	
Storage Lanes		1	0		1			1		1	1	
Taper Length (ft)			25					25			50	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95
Ped Bike Factor	1.00			1.00				1.00				1.00
Frt	0.955				0.850					0.850		0.999
Flt Protected				0.960				0.950			0.950	
Satd. Flow (prot)	3363	0	0	1788	1583	0	0	1770	1863	1583	1770	1768
Flt Permitted				0.706				0.356			0.600	
Satd. Flow (perm)	3363	0	0	1311	1583	0	0	663	1863	1583	1118	1768
Right Turn on Red		No				No				Yes		
Satd. Flow (RTOR)										215		
Link Speed (mph)	25			30					25			35
Link Distance (ft)	761			292					461			785
Travel Time (s)	20.8			6.6					12.6			15.3
Confl. Peds. (#/hr)		3	3					1				
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	53	23	173	34	231	43	10	130	257	280	93	240
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	0	0	207	274	0	0	140	257	280	93	242
Number of Detectors	1		1	1	1		1	1	0	0	1	1
Detector Template			Left				Left					
Leading Detector (ft)	44		20	44	44		20	44	0	0	44	206
Trailing Detector (ft)	-6		0	-6	-6		0	-6	0	0	-6	200
Detector 1 Position(ft)	-6		0	-6	-6		0	-6	0	0	-6	200
Detector 1 Size(ft)	50		20	50	50		20	50	6	20	50	6
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	NA		Perm	NA	pt+ov		D.P+P	D.P+P	NA	Free	Perm	NA
Protected Phases	4			4	4 5		1	1	1 2			2
Permitted Phases			4				2	2		Free		2
Detector Phase	4		4	4	4		1	1	2		2	2
Switch Phase												
Minimum Initial (s)	9.0		9.0	9.0			5.0	5.0			15.0	15.0
Minimum Split (s)	14.0		14.0	14.0			9.0	9.0			21.0	21.0
Total Split (s)	31.0		31.0	31.0			11.0	11.0			28.0	28.0
Total Split (%)	25.0%		25.0%	25.0%			8.9%	8.9%			22.6%	22.6%
Maximum Green (s)	26.0		26.0	26.0			7.0	7.0			22.0	22.0
Yellow Time (s)	4.0		4.0	4.0			3.0	3.0			4.0	4.0
All-Red Time (s)	1.0		1.0	1.0			1.0	1.0			2.0	2.0
Lost Time Adjust (s)	0.0			0.0				0.0			0.0	0.0
Total Lost Time (s)	5.0			5.0				4.0			6.0	6.0

3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



Lane Group	SBR	SBR2	SEL2	SEL	SER	SER2	Ø3
Lane Configurations							
Traffic Volume (vph)	2	3	5	396	167	2	
Future Volume (vph)	2	3	5	396	167	2	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	60			0	255		
Storage Lanes	1			1	1		
Taper Length (ft)				25			
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	
Ped Bike Factor							
Frt		0.850			0.850		
Flt Protected				0.950			
Satd. Flow (prot)	0	1504	0	1770	1583	0	
Flt Permitted				0.996			
Satd. Flow (perm)	0	1504	0	1855	1583	0	
Right Turn on Red		Yes				No	
Satd. Flow (RTOR)		185					
Link Speed (mph)				30			
Link Distance (ft)				820			
Travel Time (s)				18.6			
Confl. Peds. (#/hr)	1				3	1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	2	3	5	421	178	2	
Shared Lane Traffic (%)		10%					
Lane Group Flow (vph)	0	3	0	426	180	0	
Number of Detectors		0	1	1	1		
Detector Template			Left				
Leading Detector (ft)		0	20	44	44		
Trailing Detector (ft)		0	0	-6	-6		
Detector 1 Position(ft)		0	0	-6	-6		
Detector 1 Size(ft)		20	20	50	50		
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		
Turn Type		Free	D,Pm	Prot	Prot		
Protected Phases				5	5	3	
Permitted Phases		Free	5				
Detector Phase			5	5	5		
Switch Phase							
Minimum Initial (s)			9.0	9.0	9.0	1.0	
Minimum Split (s)			14.0	14.0	14.0	23.0	
Total Split (s)			31.0	31.0	31.0	23.0	
Total Split (%)			25.0%	25.0%	25.0%	19%	
Maximum Green (s)			26.0	26.0	26.0	19.0	
Yellow Time (s)			4.0	4.0	4.0	4.0	
All-Red Time (s)			1.0	1.0	1.0	0.0	
Lost Time Adjust (s)				0.0	0.0		
Total Lost Time (s)				5.0	5.0		

Farmington Connectivity Study

Existing Conditions

3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)

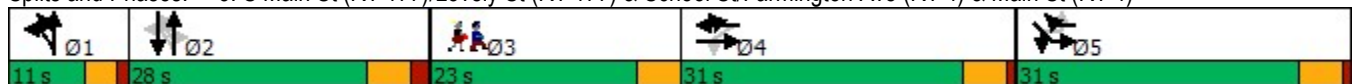


Lane Group	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL	SBT
Lead/Lag	Lag		Lag	Lag			Lead	Lead			Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes			Yes	Yes			Yes	Yes
Vehicle Extension (s)	1.5		1.5	1.5			1.5	1.5			2.5	2.5
Recall Mode	None		None	None			None	None			Min	Min
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	18.7			18.7	50.5			26.4	30.5	93.7	17.3	17.3
Actuated g/C Ratio	0.20			0.20	0.54			0.28	0.33	1.00	0.18	0.18
v/c Ratio	0.11			0.79	0.32			0.52	0.42	0.18	0.45	0.74
Control Delay	32.9			58.9	15.1			35.0	29.8	0.2	45.3	53.1
Queue Delay	0.0			0.0	0.0			0.0	0.0	0.0	0.0	0.0
Total Delay	32.9			58.9	15.1			35.0	29.8	0.2	45.3	53.1
LOS	C			E	B			C	C	A	D	D
Approach Delay	32.9			33.9					18.6			50.5
Approach LOS	C			C					B			D
Queue Length 50th (ft)	17			107	73			56	110	0	47	135
Queue Length 95th (ft)	48			#274	211			146	256	0	125	#325
Internal Link Dist (ft)	681			212					381			705
Turn Bay Length (ft)										145	110	
Base Capacity (vph)	956			372	846			272	709	1583	269	425
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	0.08			0.56	0.32			0.51	0.36	0.18	0.35	0.57

Intersection Summary

Area Type: Other  
 Cycle Length: 124  
 Actuated Cycle Length: 93.7  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.81  
 Intersection Signal Delay: 34.3      Intersection LOS: C  
 Intersection Capacity Utilization 81.5%      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: 3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



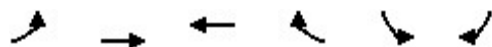
3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



Lane Group	SBR	SBR2	SEL2	SEL	SER	SER2	Ø3
Lead/Lag							Lead
Lead-Lag Optimize?							Yes
Vehicle Extension (s)			1.5	1.5	1.5		3.0
Recall Mode			None	None	None		None
Walk Time (s)							7.0
Flash Dont Walk (s)							12.0
Pedestrian Calls (#/hr)							4
Act Effct Green (s)		93.7		26.7	26.7		
Actuated g/C Ratio		1.00		0.28	0.28		
v/c Ratio		0.00		0.81	0.40		
Control Delay		0.0		47.2	34.4		
Queue Delay		0.0		0.0	0.0		
Total Delay		0.0		47.2	34.4		
LOS		A		D	C		
Approach Delay				43.4			
Approach LOS				D			
Queue Length 50th (ft)		0		214	79		
Queue Length 95th (ft)		0		#589	207		
Internal Link Dist (ft)				740			
Turn Bay Length (ft)		60			255		
Base Capacity (vph)		1504		527	450		
Starvation Cap Reductn		0		0	0		
Spillback Cap Reductn		0		0	0		
Storage Cap Reductn		0		0	0		
Reduced v/c Ratio		0.00		0.81	0.40		
<b>Intersection Summary</b>							

Farmington Connectivity Study  
 4: Farmington Ave (RT 4) & W Avon Rd (RT 167)

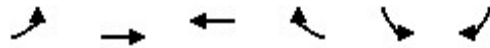
Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3
Lane Configurations							
Traffic Volume (vph)	197	627	374	35	49	138	
Future Volume (vph)	197	627	374	35	49	138	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	365			0	0	0	
Storage Lanes	1			0	1	0	
Taper Length (ft)	50				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor					1.00		
Frt			0.988		0.901		
Flt Protected	0.950				0.987		
Satd. Flow (prot)	1770	1863	1840	0	1657	0	
Flt Permitted	0.381				0.987		
Satd. Flow (perm)	710	1863	1840	0	1653	0	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			4		111		
Link Speed (mph)		30	35		30		
Link Distance (ft)		1079	965		1192		
Travel Time (s)		24.5	18.8		27.1		
Confl. Peds. (#/hr)					3		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	
Adj. Flow (vph)	203	646	386	36	51	142	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	203	646	422	0	193	0	
Number of Detectors	1	2	2		1		
Detector Template							
Leading Detector (ft)	24	246	246		24		
Trailing Detector (ft)	-6	120	120		-6		
Detector 1 Position(ft)	-6	120	120		-6		
Detector 1 Size(ft)	30	6	6		30		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		
Detector 2 Position(ft)		240	240				
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.P+P	NA	NA		Prot		
Protected Phases	1	1 2	2		4	3	
Permitted Phases	2						
Detector Phase	1	2	2		4		
Switch Phase							
Minimum Initial (s)	5.0		15.0		7.0	1.0	
Minimum Split (s)	9.5		22.5		22.5	23.0	
Total Split (s)	19.0		44.5		28.0	23.0	
Total Split (%)	16.6%		38.9%		24.5%	20%	

Farmington Connectivity Study  
 4: Farmington Ave (RT 4) & W Avon Rd (RT 167)

Existing Conditions  
 AM PEAK

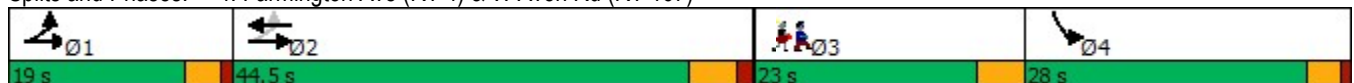


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3
Maximum Green (s)	15.0		39.0		24.0		19.0
Yellow Time (s)	3.0		4.0		3.0		4.0
All-Red Time (s)	1.0		1.5		1.0		0.0
Lost Time Adjust (s)	0.0		0.0		0.0		
Total Lost Time (s)	4.0		5.5		4.0		
Lead/Lag	Lead		Lag		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	1.5		2.5		2.0		3.0
Recall Mode	None		Min		None		None
Walk Time (s)							7.0
Flash Dont Walk (s)							11.0
Pedestrian Calls (#/hr)							9
Act Effct Green (s)	32.0	36.5	22.5		9.9		
Actuated g/C Ratio	0.55	0.63	0.39		0.17		
v/c Ratio	0.38	0.55	0.59		0.51		
Control Delay	8.6	10.1	19.8		18.8		
Queue Delay	0.0	0.0	0.0		0.0		
Total Delay	8.6	10.1	19.8		18.8		
LOS	A	B	B		B		
Approach Delay		9.7	19.8		18.8		
Approach LOS		A	B		B		
Queue Length 50th (ft)	16	68	82		20		
Queue Length 95th (ft)	105	400	333		122		
Internal Link Dist (ft)		999	885		1112		
Turn Bay Length (ft)	365						
Base Capacity (vph)	754	1667	1402		835		
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	0.27	0.39	0.30		0.23		

Intersection Summary

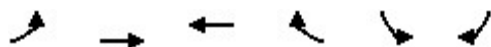
Area Type: Other  
 Cycle Length: 114.5  
 Actuated Cycle Length: 57.9  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.59  
 Intersection Signal Delay: 13.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 55.2%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 4: Farmington Ave (RT 4) & W Avon Rd (RT 167)



Farmington Connectivity Study  
5: Farmington Ave (RT 4) & Monteith Dr

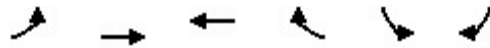
Existing Conditions  
AM PEAK



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø2	Ø3
Lane Configurations								
Traffic Volume (vph)	303	435	293	446	175	144		
Future Volume (vph)	303	435	293	446	175	144		
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			0.919			0.850		
Flt Protected		0.980			0.950			
Satd. Flow (prot)	0	1825	1712	0	1770	1583		
Flt Permitted		0.310			0.950			
Satd. Flow (perm)	0	577	1712	0	1770	1583		
Right Turn on Red				Yes		Yes		
Satd. Flow (RTOR)			121			195		
Link Speed (mph)		35	35		25			
Link Distance (ft)		784	925		548			
Travel Time (s)		15.3	18.0		14.9			
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74		
Adj. Flow (vph)	409	588	396	603	236	195		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	997	999	0	236	195		
Number of Detectors	1	0	1		3	3		
Detector Template	Left							
Leading Detector (ft)	20	0	356		24	24		
Trailing Detector (ft)	0	0	350		-6	-6		
Detector 1 Position(ft)	0	0	350		-6	-6		
Detector 1 Size(ft)	20	6	6		6	6		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)					6	6		
Detector 2 Size(ft)					6	6		
Detector 2 Type					Cl+Ex	Cl+Ex		
Detector 2 Channel								
Detector 2 Extend (s)					0.0	0.0		
Detector 3 Position(ft)					18	18		
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	D.P+P	NA	NA		Prot	Perm		
Protected Phases	1	1 2 3	2 3		4		2	3
Permitted Phases	2 3					4		
Detector Phase	1	2	2		4	4		
Switch Phase								
Minimum Initial (s)	5.0				7.0	7.0	15.0	1.0
Minimum Split (s)	9.0				16.0	16.0	20.4	7.5
Total Split (s)	10.0				30.0	30.0	71.0	9.0
Total Split (%)	8.3%				25.0%	25.0%	59%	8%

Farmington Connectivity Study  
 5: Farmington Ave (RT 4) & Monteith Dr

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø2	Ø3
Maximum Green (s)	6.0				26.0	26.0	65.6	2.5
Yellow Time (s)	3.0				3.0	3.0	4.4	4.4
All-Red Time (s)	1.0				1.0	1.0	1.0	2.1
Lost Time Adjust (s)					0.0	0.0		
Total Lost Time (s)					4.0	4.0		
Lead/Lag	Lead				Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes				Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0				1.5	1.5	3.0	3.0
Recall Mode	None				None	None	C-Max	None
Walk Time (s)					11.0	11.0		
Flash Dont Walk (s)					1.0	1.0		
Pedestrian Calls (#/hr)					3	3		
Act Effct Green (s)		92.1	90.7		19.9	19.9		
Actuated g/C Ratio		0.77	0.76		0.17	0.17		
v/c Ratio		2.26	0.76		0.81	0.46		
Control Delay		589.3	12.9		67.9	9.1		
Queue Delay		0.0	0.0		0.0	0.0		
Total Delay		589.3	12.9		67.9	9.1		
LOS		F	B		E	A		
Approach Delay		589.3	12.9		41.3			
Approach LOS		F	B		D			
Queue Length 50th (ft)		~913	332		178	0		
Queue Length 95th (ft)		#889	382		198	27		
Internal Link Dist (ft)		704	845		468			
Turn Bay Length (ft)								
Base Capacity (vph)		442	1323		386	497		
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		2.26	0.76		0.61	0.39		

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 16 (13%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.26  
 Intersection Signal Delay: 254.7  
 Intersection LOS: F  
 Intersection Capacity Utilization 103.3%  
 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.

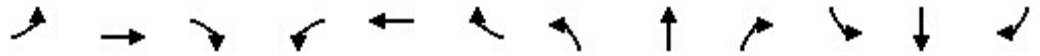
Splits and Phases: 5: Farmington Ave (RT 4) & Monteith Dr



Lanes, Volumes, Timings  
 SLR

Farmington Connectivity Study  
 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)

Existing Conditions  
 AM PEAK

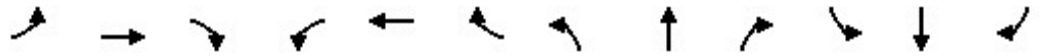


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	558	6	29	499	174	6	1	18	351	9	36
Future Volume (vph)	29	558	6	29	499	174	6	1	18	351	9	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90		0	90		90	0		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	65			110			25			50		
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								0.97		1.00		
Fr <sub>t</sub>		0.998				0.850		0.857				0.880
Fl <sub>t</sub> Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1719	1806	0	1719	1810	1538	1719	1502	0	1719	1592	0
Fl <sub>t</sub> Permitted	0.288			0.227			0.724			0.744		
Satd. Flow (perm)	521	1806	0	411	1810	1538	1310	1502	0	1341	1592	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				175		20				40
Link Speed (mph)		40			40			30				35
Link Distance (ft)		635			779			428				768
Travel Time (s)		10.8			13.3			9.7				15.0
Confl. Peds. (#/hr)									2	2		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	32	613	7	32	548	191	7	1	20	386	10	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	620	0	32	548	191	7	21	0	386	50	0
Number of Detectors	1	2		1	2	0	1	1		1	1	
Detector Template												
Leading Detector (ft)	45	342		45	342	0	55	50		50	60	
Trailing Detector (ft)	-5	190		-5	190	0	-5	-10		-10	-10	
Detector 1 Position(ft)	-5	190		-5	190	0	-5	-10		-10	-10	
Detector 1 Size(ft)	50	6		50	6	20	60	60		60	70	
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)		336			336							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	8		7	8	
Permitted Phases	6			2		2	8			8		
Detector Phase	1	6		5	2	2	7	8		7	8	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	5.0	7.0		5.0	7.0	
Minimum Split (s)	10.4	22.0		10.4	22.0	22.0	11.0	14.0		11.0	14.0	
Total Split (s)	15.0	48.0		15.0	48.0	48.0	27.0	16.0		27.0	16.0	

Lane Group	Ø9
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)	
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	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	14.0
Total Split (s)	14.0

Farmington Connectivity Study  
 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)

Existing Conditions  
 AM PEAK

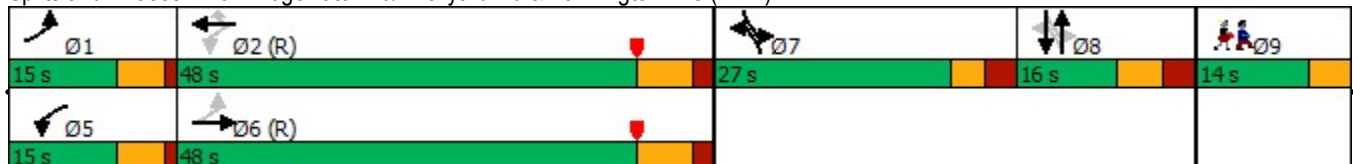


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	12.5%	40.0%		12.5%	40.0%	40.0%	22.5%	13.3%		22.5%	13.3%	
Maximum Green (s)	9.6	41.0		9.6	41.0	41.0	21.1	9.0		21.1	9.0	
Yellow Time (s)	4.4	5.0		4.4	5.0	5.0	3.0	4.1		3.0	4.1	
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	2.9	2.9		2.9	2.9	
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)	5.4	7.0		5.4	7.0	7.0	5.9	7.0		5.9	7.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	68.3	63.0		68.3	63.0	63.0	29.7	7.4		29.7	7.4	
Actuated g/C Ratio	0.57	0.52		0.57	0.52	0.52	0.25	0.06		0.25	0.06	
v/c Ratio	0.09	0.65		0.11	0.58	0.21	0.02	0.19		0.96	0.37	
Control Delay	13.2	28.0		13.5	25.8	4.9	29.8	25.6		76.5	29.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	13.2	28.0		13.5	25.8	4.9	29.8	25.6		76.5	29.1	
LOS	B	C		B	C	A	C	C		E	C	
Approach Delay		27.3			20.1			26.7			71.1	
Approach LOS		C			C			C			E	
Queue Length 50th (ft)	9	346		9	288	6	4	1		273	8	
Queue Length 95th (ft)	31	#702		31	#575	58	15	27		#390	48	
Internal Link Dist (ft)		555			699			348			688	
Turn Bay Length (ft)	90			90		90				150		
Base Capacity (vph)	401	948		345	949	890	401	131		403	156	
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	0.08	0.65		0.09	0.58	0.21	0.02	0.16		0.96	0.32	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.96  
 Intersection Signal Delay: 34.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 67.5%  
 ICU Level of Service C  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

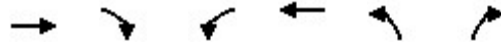
Splits and Phases: 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)



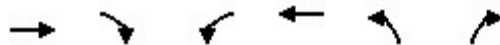
Lane Group	Ø9
Total Split (%)	12%
Maximum Green (s)	10.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	16.0
Pedestrian Calls (#/hr)	2
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

Farmington Connectivity Study  
 7: Garden St & Farmington Ave (RT 4)

Existing Conditions  
 AM PEAK



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø4
Lane Configurations	↑↑		↵	↑	↵↵			
Traffic Volume (vph)	1041	91	13	622	129	35		
Future Volume (vph)	1041	91	13	622	129	35		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)		0	200		0	0		
Storage Lanes		0	1		1	0		
Taper Length (ft)			50		25			
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00		
Ped Bike Factor	1.00		1.00		0.98			
Frt	0.988				0.971			
Flt Protected			0.950		0.962			
Satd. Flow (prot)	3490	0	1770	1863	1740	0		
Flt Permitted			0.200		0.962			
Satd. Flow (perm)	3490	0	372	1863	1700	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)	10				8			
Link Speed (mph)	30			30	30			
Link Distance (ft)	1042			566	488			
Travel Time (s)	23.7			12.9	11.1			
Confl. Peds. (#/hr)		5	5		8			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Adj. Flow (vph)	1096	96	14	655	136	37		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	1192	0	14	655	173	0		
Number of Detectors	0		0	0	3			
Detector Template								
Leading Detector (ft)	0		0	0	24			
Trailing Detector (ft)	0		0	0	-6			
Detector 1 Position(ft)	0		0	0	-6			
Detector 1 Size(ft)	6		20	6	6			
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel								
Detector 1 Extend (s)	0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0		0.0	0.0	0.0			
Detector 2 Position(ft)					6			
Detector 2 Size(ft)					6			
Detector 2 Type					Cl+Ex			
Detector 2 Channel								
Detector 2 Extend (s)					0.0			
Detector 3 Position(ft)					18			
Detector 3 Size(ft)					6			
Detector 3 Type					Cl+Ex			
Detector 3 Channel								
Detector 3 Extend (s)					0.0			
Turn Type	NA		Perm	NA	Prot			
Protected Phases	2 4			2	5		3	4
Permitted Phases			2					
Detector Phase	2		2	2	5			

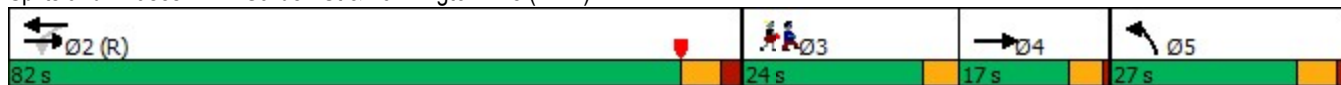


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø4
<b>Switch Phase</b>								
Minimum Initial (s)			15.0	15.0	7.0		7.0	6.0
Minimum Split (s)			22.1	22.1	13.3		24.0	10.8
Total Split (s)			82.0	82.0	27.0		24.0	17.0
Total Split (%)			54.7%	54.7%	18.0%		16%	11%
Maximum Green (s)			74.9	74.9	20.7		20.0	12.2
Yellow Time (s)			4.6	4.6	4.5		4.0	3.8
All-Red Time (s)			2.5	2.5	1.8		0.0	1.0
Lost Time Adjust (s)			0.0	0.0	0.0			
Total Lost Time (s)			7.1	7.1	6.3			
<b>Lead/Lag</b>							Lead	Lag
Lead-Lag Optimize?							Yes	Yes
Vehicle Extension (s)			3.0	3.0	1.5		3.0	1.5
Recall Mode			C-Max	C-Max	None		None	None
Walk Time (s)							7.0	
Flash Dont Walk (s)							13.0	
Pedestrian Calls (#/hr)							13	
Act Effct Green (s)	108.6		108.6	108.6	18.4			
Actuated g/C Ratio	0.72		0.72	0.72	0.12			
v/c Ratio	0.47		0.05	0.49	0.78			
Control Delay	11.9		2.5	2.6	83.8			
Queue Delay	0.0		0.0	0.7	0.0			
Total Delay	11.9		2.5	3.2	83.8			
LOS	B		A	A	F			
Approach Delay	11.9			3.2	83.8			
Approach LOS	B			A	F			
Queue Length 50th (ft)	170		0	17	159			
Queue Length 95th (ft)	437		m2	m140	234			
Internal Link Dist (ft)	962			486	408			
Turn Bay Length (ft)			200					
Base Capacity (vph)	2528		269	1348	259			
Starvation Cap Reductn	0		0	351	0			
Spillback Cap Reductn	156		0	0	0			
Storage Cap Reductn	0		0	0	0			
Reduced v/c Ratio	0.50		0.05	0.66	0.67			

**Intersection Summary**

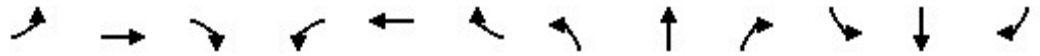
Area Type:	Other
Cycle Length:	150
Actuated Cycle Length:	150
Offset:	40 (27%), Referenced to phase 2:EBWB, Start of Yellow
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.78
Intersection Signal Delay:	15.2
Intersection LOS:	B
Intersection Capacity Utilization:	53.2%
ICU Level of Service:	A
Analysis Period (min):	15
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 7: Garden St & Farmington Ave (RT 4)



Farmington Connectivity Study  
 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4)

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	1019	107	48	496	206	97	141	134	212	102	16
Future Volume (vph)	9	1019	107	48	496	206	97	141	134	212	102	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	255		0	100		50	0		0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (ft)	65			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.956				0.850		0.994	
Flt Protected	0.950			0.950			0.950				0.969	
Satd. Flow (prot)	1770	3539	1583	1770	1781	0	1770	1863	1583	0	1794	0
Flt Permitted	0.087			0.108			0.950				0.969	
Satd. Flow (perm)	162	3539	1583	201	1781	0	1770	1863	1583	0	1794	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		566			848			677			693	
Travel Time (s)		12.9			19.3			15.4			15.8	
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)	10	1108	116	52	539	224	105	153	146	230	111	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	1108	116	52	763	0	105	153	146	0	358	0
Number of Detectors	3	3	4	1	1		3	3	2	1	2	
Detector Template										Left		
Leading Detector (ft)	30	30	36	34	34		30	30	48	20	48	
Trailing Detector (ft)	0	0	-6	0	0		0	0	0	0	-6	
Detector 1 Position(ft)	0	0	-6	0	0		0	0	0	0	-6	
Detector 1 Size(ft)	6	6	6	34	34		6	6	12	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	12	12	6				12	12	18		6	
Detector 2 Size(ft)	6	6	6				6	6	30		42	
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0	0.0				0.0	0.0	0.0		0.0	
Detector 3 Position(ft)	24	24	18				24	24				
Detector 3 Size(ft)	6	6	6				6	6				
Detector 3 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex				
Detector 3 Channel												
Detector 3 Extend (s)	0.0	0.0	0.0				0.0	0.0				
Detector 4 Position(ft)			30									
Detector 4 Size(ft)			6									
Detector 4 Type			Cl+Ex									
Detector 4 Channel												
Detector 4 Extend (s)			0.0									
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Split	NA	pt+ov	Split	NA	

Lane Group	Ø3
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)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Detector 4 Position(ft)	
Detector 4 Size(ft)	
Detector 4 Type	
Detector 4 Channel	
Detector 4 Extend (s)	
Turn Type	

Farmington Connectivity Study  
 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4)

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	1	6		5	2		7	7	5 7	4	4	
Permitted Phases	6		6	2								
Detector Phase	1	6	6	5	2		7	7	7	4	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	7.0	20.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	9.5	27.3	27.3	12.0	27.3		13.0	13.0		22.5	22.5	
Total Split (s)	15.0	54.0	54.0	15.0	54.0		23.0	23.0		34.0	34.0	
Total Split (%)	10.0%	36.0%	36.0%	10.0%	36.0%		15.3%	15.3%		22.7%	22.7%	
Maximum Green (s)	11.0	46.7	46.7	10.0	46.7		17.0	17.0		28.3	28.3	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	2.8	2.8	2.0	2.8		3.0	3.0		2.7	2.7	
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	7.3	7.3	5.0	7.3		6.0	6.0				5.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag					Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None		None	None	
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										5.0	5.0	
Pedestrian Calls (#/hr)										0	0	
Act Effct Green (s)	71.2	63.9	63.9	75.6	70.2		17.0	17.0	28.0			40.1
Actuated g/C Ratio	0.47	0.43	0.43	0.50	0.47		0.11	0.11	0.19			0.27
v/c Ratio	0.08	0.74	0.17	0.29	0.92		0.52	0.73	0.49			0.75
Control Delay	14.7	31.5	20.7	22.0	52.0		71.1	82.8	58.6			61.1
Queue Delay	0.0	0.5	0.0	0.0	0.0		0.0	0.0	0.0			0.0
Total Delay	14.7	32.0	20.7	22.0	52.0		71.1	82.8	58.6			61.1
LOS	B	C	C	C	D		E	F	E			E
Approach Delay		30.8			50.1			71.0				61.1
Approach LOS		C			D			E				E
Queue Length 50th (ft)	3	484	72	27	671		98	147	127			326
Queue Length 95th (ft)	m6	#646	m57	m24	#1126		157	218	187			438
Internal Link Dist (ft)		486			768			597				613
Turn Bay Length (ft)	100		150	255			100		50			
Base Capacity (vph)	199	1507	673	206	833		221	233	302			479
Starvation Cap Reductn	0	117	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	0.05	0.80	0.17	0.25	0.92		0.48	0.66	0.48			0.75

Intersection Summary

Area Type:	Other
Cycle Length:	150
Actuated Cycle Length:	150
Offset:	20 (13%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow
Natural Cycle:	150
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.92
Intersection Signal Delay:	46.0
Intersection LOS:	D
Intersection Capacity Utilization:	81.2%
ICU Level of Service:	D

Lane Group	Ø3
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	25.0
Total Split (s)	24.0
Total Split (%)	16%
Maximum Green (s)	20.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	13.0
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	
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	
<b>Intersection Summary</b>	








Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

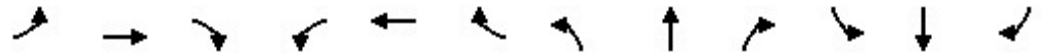
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4)

 Ø1	 Ø2 (R)	 Ø3	 Ø4	 Ø7
15 s	54 s	24 s	34 s	23 s
 Ø5	 Ø6 (R)			
15 s	54 s			

Farmington Connectivity Study  
 9: High St/Backage Rd & Farmington Ave (RT 4)

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	1311	27	25	777	6	28	1	180	3	0	2
Future Volume (vph)	6	1311	27	25	777	6	28	1	180	3	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	85		100	115		0	0		85	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	70			115			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.999				0.850		0.946	
Flt Protected	0.950			0.950				0.954			0.971	
Satd. Flow (prot)	1752	3494	0	1752	1843	0	0	1760	1568	0	1694	0
Flt Permitted	0.281			0.145								
Satd. Flow (perm)	518	3494	0	267	1843	0	0	1845	1568	0	1745	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		2							200			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		848			473			291			375	
Travel Time (s)		19.3			10.8			6.6			8.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	7	1457	30	28	863	7	31	1	200	3	0	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	1487	0	28	870	0	0	32	200	0	5	0
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template							Left			Left		
Leading Detector (ft)	40	40		25	25		20	35	35	20	30	
Trailing Detector (ft)	0	0		-10	-10		0	0	0	0	0	
Detector 1 Position(ft)	0	0		-10	-10		0	0	0	0	0	
Detector 1 Size(ft)	40	40		35	35		20	35	35	20	30	
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	pm+pt	NA		pm+pt	NA		D.P+P	NA	Prot	Perm	NA	
Protected Phases	1	6		5	2		4	4 7	4 7		7	
Permitted Phases	6			2			7			7		
Detector Phase	1	6		5	2		4	4	4	7	7	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		7.0			7.0	7.0	
Minimum Split (s)	9.0	21.7		9.0	21.7		11.7			12.0	12.0	
Total Split (s)	13.0	83.0		13.0	83.0		14.0			16.0	16.0	
Total Split (%)	8.7%	55.3%		8.7%	55.3%		9.3%			10.7%	10.7%	
Maximum Green (s)	9.0	76.3		9.0	76.3		9.3			11.0	11.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0			3.0	3.0	
All-Red Time (s)	1.0	2.2		1.0	2.2		1.7			2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	
Total Lost Time (s)	4.0	6.7		4.0	6.7						5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lag					

Lane Group	Ø3
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)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	24.0
Total Split (s)	24.0
Total Split (%)	16%
Maximum Green (s)	20.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead

Farmington Connectivity Study  
 9: High St/Backage Rd & Farmington Ave (RT 4)

Existing Conditions  
 AM PEAK

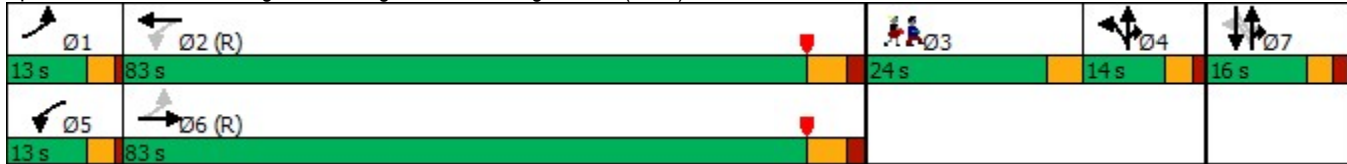


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes					
Vehicle Extension (s)	1.5	2.0		1.5	2.0		2.0			2.0	2.0	
Recall Mode	None	C-Min		None	C-Min		None			None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	128.0	122.3		129.7	126.0			10.8	10.8			7.0
Actuated g/C Ratio	0.85	0.82		0.86	0.84			0.07	0.07			0.05
v/c Ratio	0.01	0.52		0.10	0.56			0.24	0.67			0.06
Control Delay	1.8	8.6		2.9	7.0			67.0	18.9			70.2
Queue Delay	0.0	0.1		0.0	0.0			0.0	0.0			0.0
Total Delay	1.8	8.8		2.9	7.0			67.0	18.9			70.2
LOS	A	A		A	A			E	B			E
Approach Delay		8.7			6.9			25.5				70.3
Approach LOS		A			A			C				E
Queue Length 50th (ft)	1	323		2	144			31	0			5
Queue Length 95th (ft)	m0	173		13	590			60	74			20
Internal Link Dist (ft)		768			393			211				295
Turn Bay Length (ft)	85			115					85			
Base Capacity (vph)	524	2848		321	1547			152	312			127
Starvation Cap Reductn	0	405		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	0.01	0.61		0.09	0.56			0.21	0.64			0.04

Intersection Summary

Area Type: Other  
 Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 45 (30%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.67  
 Intersection Signal Delay: 9.7 Intersection LOS: A  
 Intersection Capacity Utilization 67.7% ICU Level of Service C  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

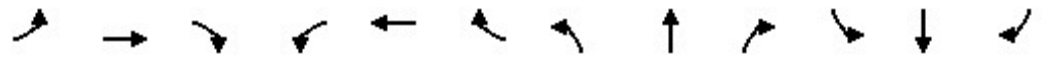
Splits and Phases: 9: High St/Backage Rd & Farmington Ave (RT 4)



Lane Group	Ø3
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	13.0
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	
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	

Farmington Connectivity Study  
 10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	4	1	0	52	2	43	2	412	111	108	399	2
Future Volume (vph)	4	1	0	52	2	43	2	412	111	108	399	2
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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00			1.00			1.00	
Frt					0.940			0.971				
Flt Protected		0.960			0.974						0.989	
Satd. Flow (prot)	0	1705	0	0	1626	0	0	1724	0	0	1756	0
Flt Permitted		0.832			0.830			0.998			0.777	
Satd. Flow (perm)	0	1477	0	0	1384	0	0	1721	0	0	1380	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					32			14				
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		360			802			2590			707	
Travel Time (s)		8.2			18.2			44.1			12.1	
Confl. Peds. (#/hr)			1	1			1					1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Adj. Flow (vph)	5	1	0	61	2	51	2	485	131	127	469	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	6	0	0	114	0	0	618	0	0	598	0
Number of Detectors	1	1		1	1		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	22		20	22		20	206		20	206	
Trailing Detector (ft)	0	-10		0	-10		0	100		0	100	
Detector 1 Position(ft)	0	-10		0	-10		0	100		0	100	
Detector 1 Size(ft)	20	32		20	32		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)								200			200	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		D.P+P	NA	
Protected Phases		4			4			2		1	12	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		1	1	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0		5.0		
Minimum Split (s)	12.0	12.0		12.0	12.0		21.6	21.6		9.0		
Total Split (s)	30.0	30.0		30.0	30.0		51.6	51.6		12.0		
Total Split (%)	26.0%	26.0%		26.0%	26.0%		44.6%	44.6%		10.4%		
Maximum Green (s)	25.0	25.0		25.0	25.0		45.0	45.0		8.0		
Yellow Time (s)	3.3	3.3		3.3	3.3		4.2	4.2		3.0		

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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)	
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	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	22.0
Total Split (s)	22.0
Total Split (%)	19%
Maximum Green (s)	18.0
Yellow Time (s)	4.0

Farmington Connectivity Study  
 10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	1.7	1.7		1.7	1.7		2.4	2.4		1.0		
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.0			5.0			6.6				
Lead/Lag	Lag	Lag		Lag	Lag		Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes		
Vehicle Extension (s)	1.5	1.5		1.5	1.5		2.5	2.5		3.0		
Recall Mode	None	None		None	None		Min	Min		None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		10.1			10.1			29.9				41.9
Actuated g/C Ratio		0.16			0.16			0.46				0.64
v/c Ratio		0.03			0.47			0.77				0.64
Control Delay		32.0			30.9			24.9				13.3
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		32.0			30.9			24.9				13.3
LOS		C			C			C				B
Approach Delay		32.0			30.9			24.9				13.3
Approach LOS		C			C			C				B
Queue Length 50th (ft)		2			28			171				74
Queue Length 95th (ft)		15			101			478				339
Internal Link Dist (ft)		280			722			2510				627
Turn Bay Length (ft)												
Base Capacity (vph)		639			617			1268				940
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			0.18			0.49				0.64

Intersection Summary

Area Type:	Other
Cycle Length:	115.6
Actuated Cycle Length:	65
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.77
Intersection Signal Delay:	20.2
Intersection LOS:	C
Intersection Capacity Utilization:	74.5%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd



Lane Group	Ø3
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	5
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	

Farmington Connectivity Study  
 11: Harris Rd/W Avon Rd (RT 167) & W Avon Rd (RT167)

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	282	66	32	207	270	101
Future Volume (vph)	282	66	32	207	270	101
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	0.974			0.963		
Flt Protected	0.961			0.993		
Satd. Flow (prot)	1744	0	0	1850	1794	0
Flt Permitted	0.961			0.993		
Satd. Flow (perm)	1744	0	0	1850	1794	0
Link Speed (mph)	40			30	40	
Link Distance (ft)	781			809	2590	
Travel Time (s)	13.3			18.4	44.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	303	71	34	223	290	109
Shared Lane Traffic (%)						
Lane Group Flow (vph)	374	0	0	257	399	0
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	62.7%
ICU Level of Service	B
Analysis Period (min)	15

Farmington Connectivity Study  
 11: Harris Rd/W Avon Rd (RT 167) & W Avon Rd (RT167)

Existing Conditions  
 AM PEAK



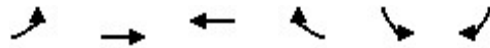
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	282	66	32	207	270	101
Future Volume (vph)	282	66	32	207	270	101
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	303	71	34	223	290	109
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total (vph)	374	257	399			
Volume Left (vph)	303	34	0			
Volume Right (vph)	71	0	109			
Hadj (s)	0.08	0.06	-0.13			
Departure Headway (s)	5.8	5.8	5.4			
Degree Utilization, x	0.60	0.41	0.60			
Capacity (veh/h)	594	578	640			
Control Delay (s)	16.9	12.8	16.0			
Approach Delay (s)	16.9	12.8	16.0			
Approach LOS	C	B	C			
Intersection Summary						
Delay			15.5			
Level of Service			C			
Intersection Capacity Utilization			62.7%	ICU Level of Service		B
Analysis Period (min)			15			

Intersection	
Intersection Delay, s/veh	15.5
Intersection LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑	↑	
Traffic Vol, veh/h	282	66	32	207	270	101
Future Vol, veh/h	282	66	32	207	270	101
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	303	71	34	223	290	109
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	16.9	12.7	15.9
HCM LOS	C	B	C

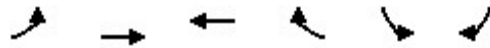
Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	13%	81%	0%
Vol Thru, %	87%	0%	73%
Vol Right, %	0%	19%	27%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	239	348	371
LT Vol	32	282	0
Through Vol	207	0	270
RT Vol	0	66	101
Lane Flow Rate	257	374	399
Geometry Grp	1	1	1
Degree of Util (X)	0.408	0.595	0.591
Departure Headway (Hd)	5.721	5.723	5.336
Convergence, Y/N	Yes	Yes	Yes
Cap	627	629	674
Service Time	3.777	3.77	3.385
HCM Lane V/C Ratio	0.41	0.595	0.592
HCM Control Delay	12.7	16.9	15.9
HCM Lane LOS	B	C	C
HCM 95th-tile Q	2	3.9	3.9



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	77	184	36	12	25	69
Future Volume (vph)	77	184	36	12	25	69
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			0.967		0.901	
Flt Protected		0.985			0.987	
Satd. Flow (prot)	0	1800	1767	0	1625	0
Flt Permitted		0.985			0.987	
Satd. Flow (perm)	0	1800	1767	0	1625	0
Link Speed (mph)		30	30		25	
Link Distance (ft)		546	304		789	
Travel Time (s)		12.4	6.9		21.5	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	92	219	43	14	30	82
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	311	57	0	112	0
Sign Control		Free	Free		Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	32.9%
ICU Level of Service	A
Analysis Period (min)	15



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	77	184	36	12	25	69
Future Volume (Veh/h)	77	184	36	12	25	69
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	92	219	43	14	30	82
<b>Pedestrians</b>						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	57				453	50
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	57				453	50
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	94				94	92
cM capacity (veh/h)	1535				527	1013
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>SB 1</b>			
Volume Total	311	57	112			
Volume Left	92	0	30			
Volume Right	0	14	82			
cSH	1535	1700	812			
Volume to Capacity	0.06	0.03	0.14			
Queue Length 95th (ft)	5	0	12			
Control Delay (s)	2.6	0.0	10.1			
Lane LOS	A		B			
Approach Delay (s)	2.6	0.0	10.1			
Approach LOS			B			
<b>Intersection Summary</b>						
Average Delay			4.0			
Intersection Capacity Utilization			32.9%	ICU Level of Service	A	
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	3.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	77	184	36	12	25	69
Future Vol, veh/h	77	184	36	12	25	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	92	219	43	14	30	82

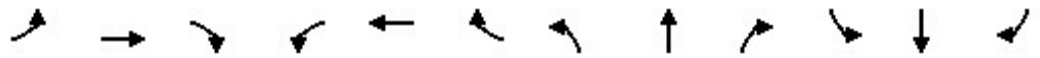
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	57	0	-	0	453 50
Stage 1	-	-	-	-	50 -
Stage 2	-	-	-	-	403 -
Critical Hdwy	4.14	-	-	-	6.44 6.24
Critical Hdwy Stg 1	-	-	-	-	5.44 -
Critical Hdwy Stg 2	-	-	-	-	5.44 -
Follow-up Hdwy	2.236	-	-	-	3.536 3.336
Pot Cap-1 Maneuver	1535	-	-	-	561 1013
Stage 1	-	-	-	-	967 -
Stage 2	-	-	-	-	671 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1535	-	-	-	523 1013
Mov Cap-2 Maneuver	-	-	-	-	523 -
Stage 1	-	-	-	-	901 -
Stage 2	-	-	-	-	671 -

Approach	EB	WB	SB
HCM Control Delay, s	2.2	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1535	-	-	-	811
HCM Lane V/C Ratio	0.06	-	-	-	0.138
HCM Control Delay (s)	7.5	0	-	-	10.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.5

Farmington Connectivity Study  
13: Stafford Ave & Stevens St

Existing Conditions  
AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	29	260	92	65	93	17	50	128	55	46	188	33
Future Volume (vph)	29	260	92	65	93	17	50	128	55	46	188	33
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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00			0.99			1.00	
Frt		0.967			0.987			0.968			0.983	
Flt Protected		0.996			0.982			0.989			0.991	
Satd. Flow (prot)	0	1781	0	0	1805	0	0	1774	0	0	1815	0
Flt Permitted		0.968			0.729			0.784			0.862	
Satd. Flow (perm)	0	1731	0	0	1338	0	0	1406	0	0	1578	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		543			653			565			383	
Travel Time (s)		12.3			14.8			12.8			8.7	
Confl. Peds. (#/hr)			8	8					1	1		
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	34	306	108	76	109	20	59	151	65	54	221	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	448	0	0	205	0	0	275	0	0	314	0
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	81		20	81		20	116		20	106	
Trailing Detector (ft)	0	75		0	75		0	110		0	100	
Detector 1 Position(ft)	0	75		0	75		0	110		0	100	
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	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	19.0	19.0		19.0	19.0		19.0	19.0		19.0	19.0	
Total Split (s)	34.0	34.0		34.0	34.0		29.0	29.0		29.0	29.0	
Total Split (%)	41.5%	41.5%		41.5%	41.5%		35.4%	35.4%		35.4%	35.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	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			4.0			4.0	
Lead/Lag							Lag	Lag		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		2.0	2.0		2.0	2.0	

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	19.0
Total Split (s)	19.0
Total Split (%)	23%
Maximum Green (s)	17.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0

Farmington Connectivity Study  
13: Stafford Ave & Stevens St

Existing Conditions  
AM PEAK

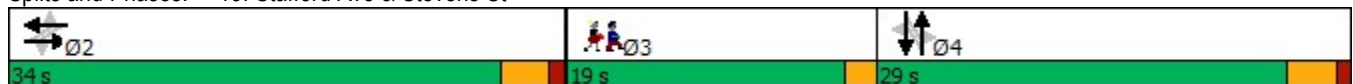


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		30.1			30.1			18.1				18.1
Actuated g/C Ratio		0.40			0.40			0.24				0.24
v/c Ratio		0.65			0.38			0.82				0.83
Control Delay		24.5			19.6			46.5				45.9
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		24.5			19.6			46.5				45.9
LOS		C			B			D				D
Approach Delay		24.5			19.6			46.5				45.9
Approach LOS		C			B			D				D
Queue Length 50th (ft)		157			63			121				139
Queue Length 95th (ft)		277			127			190				210
Internal Link Dist (ft)		463			573			485				303
Turn Bay Length (ft)												
Base Capacity (vph)		692			534			468				525
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		0.65			0.38			0.59				0.60

Intersection Summary

Area Type:	Other
Cycle Length:	82
Actuated Cycle Length:	75.2
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.83
Intersection Signal Delay:	34.0
Intersection LOS:	C
Intersection Capacity Utilization:	53.2%
ICU Level of Service:	A
Analysis Period (min):	15

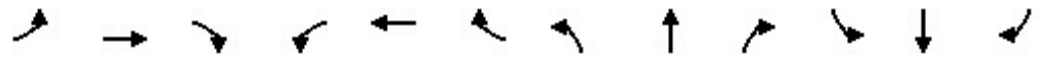
Splits and Phases: 13: Stafford Ave & Stevens St



Lane Group	Ø3
Recall Mode	Ped
Walk Time (s)	7.0
Flash Dont Walk (s)	10.0
Pedestrian Calls (#/hr)	9
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

Farmington Connectivity Study  
 14: S Main St (RT 177) & Mill St

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗	↖	↗		↖	↗	
Traffic Volume (vph)	26	6	51	37	6	7	56	641	53	3	634	12
Future Volume (vph)	26	6	51	37	6	7	56	641	53	3	634	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		95	0		100	60		0	0		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
Frt			0.850			0.850		0.989			0.997	
Flt Protected		0.961			0.958		0.950			0.950		
Satd. Flow (prot)	0	1790	1583	0	1785	1583	1770	1842	0	1770	1857	0
Flt Permitted		0.734			0.731		0.272			0.308		
Satd. Flow (perm)	0	1367	1583	0	1362	1583	507	1842	0	574	1857	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			30			25				25
Link Distance (ft)		906			356			584				461
Travel Time (s)		24.7			8.1			15.9				12.6
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	27	6	53	39	6	7	58	668	55	3	660	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	33	53	0	45	7	58	723	0	3	673	0
Number of Detectors	1	1	1	1	1	1	1	0		0	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	50	50	20	40	40	50	0		0	0	
Trailing Detector (ft)	0	0	0	0	-10	-10	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	-10	-10	0	0		0	0	
Detector 1 Size(ft)	20	50	50	20	50	50	50	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	pm+ov	Perm	NA	Prot	D.P+P	NA		Perm	NA	
Protected Phases		4	2		4	4	2	1 2				1
Permitted Phases	4		4	4			1			1		
Detector Phase	4	4	2	4	4	4	2	2		1	1	
Switch Phase												
Minimum Initial (s)	6.0	6.0	5.0	6.0	6.0	6.0	5.0			25.0	25.0	
Minimum Split (s)	10.3	10.3	9.6	10.3	10.3	10.3	9.6			29.6	29.6	
Total Split (s)	21.3	21.3	15.6	21.3	21.3	21.3	15.6			49.6	49.6	
Total Split (%)	19.1%	19.1%	14.0%	19.1%	19.1%	19.1%	14.0%			44.5%	44.5%	
Maximum Green (s)	17.0	17.0	11.0	17.0	17.0	17.0	11.0			45.0	45.0	
Yellow Time (s)	3.2	3.2	3.6	3.2	3.2	3.2	3.6			3.6	3.6	
All-Red Time (s)	1.1	1.1	1.0	1.1	1.1	1.1	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)		4.3	4.6		4.3	4.3	4.6			4.6	4.6	
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag			Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	

Lane Group	Ø3
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)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	25.0
Total Split (s)	25.0
Total Split (%)	22%
Maximum Green (s)	21.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes

Farmington Connectivity Study  
 14: S Main St (RT 177) & Mill St

Existing Conditions  
 AM PEAK

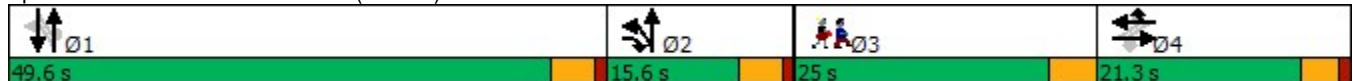


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5			3.0	3.0	
Recall Mode	None	None	None	None	None	None	None			Max	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		7.2	16.0		7.2	7.2	54.2	60.1		46.5	46.5	
Actuated g/C Ratio		0.09	0.21		0.09	0.09	0.71	0.79		0.61	0.61	
v/c Ratio		0.26	0.16		0.35	0.05	0.12	0.50		0.01	0.60	
Control Delay		41.8	21.4		44.6	37.7	6.7	7.9		12.7	16.3	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.2		0.0	1.0	
Total Delay		41.8	21.4		44.6	37.7	6.7	8.1		12.7	17.3	
LOS		D	C		D	D	A	A		B	B	
Approach Delay		29.2			43.7			8.0			17.2	
Approach LOS		C			D			A			B	
Queue Length 50th (ft)		14	18		19	3	4	76		0	151	
Queue Length 95th (ft)		51	40		66	18	34	457		7	#611	
Internal Link Dist (ft)		826			276			504			381	
Turn Bay Length (ft)			95			100	60					
Base Capacity (vph)		314	348		313	364	571	1507		349	1131	
Starvation Cap Reductn		0	0		0	0	0	244		0	225	
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		0.11	0.15		0.14	0.02	0.10	0.57		0.01	0.74	

Intersection Summary

Area Type: Other  
 Cycle Length: 111.5  
 Actuated Cycle Length: 76.4  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.60  
 Intersection Signal Delay: 14.2  
 Intersection LOS: B  
 Intersection Capacity Utilization 63.0%  
 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.

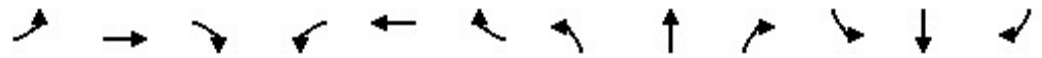
Splits and Phases: 14: S Main St (RT 177) & Mill St



Lane Group	Ø3
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	14.0
Pedestrian Calls (#/hr)	1
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

Farmington Connectivity Study  
 15: S Main St (RT 177) & Railroad Ave/New Britain Ave

Existing Conditions  
 AM PEAK

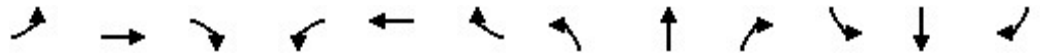


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔		↔	↔	
Traffic Volume (vph)	5	6	23	15	2	141	8	600	18	181	527	3
Future Volume (vph)	5	6	23	15	2	141	8	600	18	181	527	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		200	80		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			80			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00		1.00		
Frt		0.907				0.850		0.996				0.999
Flt Protected		0.993			0.958		0.950			0.950		
Satd. Flow (prot)	0	1661	0	0	1767	1568	1752	1836	0	1752	1843	0
Flt Permitted		0.959			0.753		0.384			0.232		
Satd. Flow (perm)	0	1605	0	0	1389	1568	708	1836	0	428	1843	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			30			25				25
Link Distance (ft)		579			590			1222				584
Travel Time (s)		15.8			13.4			33.3				15.9
Confl. Peds. (#/hr)									4	4		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	5	6	24	15	2	145	8	619	19	187	543	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	35	0	0	17	145	8	638	0	187	546	0
Number of Detectors	1	1		1	1	1	0	2		1	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40	40	0	206		50	206	
Trailing Detector (ft)	0	-10		0	-10	-10	0	100		0	100	
Detector 1 Position(ft)	0	-10		0	-10	-10	0	100		0	100	
Detector 1 Size(ft)	20	50		20	50	50	20	6		50	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)								200			200	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		D.P+P	NA	
Protected Phases		4			4	24		1		2	12	
Permitted Phases	4			4			1			1		
Detector Phase	4	4		4	4	4	1	1		2	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		25.0	25.0		5.0		
Minimum Split (s)	10.2	10.2		10.2	10.2		29.6	29.6		9.6		
Total Split (s)	14.2	14.2		14.2	14.2		74.6	74.6		19.6		

Lane Group	Ø3
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)	
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	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	23.0
Total Split (s)	23.0

Farmington Connectivity Study  
 15: S Main St (RT 177) & Railroad Ave/New Britain Ave

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	10.8%	10.8%		10.8%	10.8%		56.8%	56.8%		14.9%		
Maximum Green (s)	10.0	10.0		10.0	10.0		70.0	70.0		15.0		
Yellow Time (s)	3.2	3.2		3.2	3.2		3.6	3.6		3.6		
All-Red Time (s)	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		
Total Lost Time (s)		4.2			4.2		4.6	4.6		4.6		
Lead/Lag	Lag	Lag		Lag	Lag		Lead	Lead		Lag		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes		
Vehicle Extension (s)	1.5	1.5		1.5	1.5		2.5	2.5		1.5		
Recall Mode	None	None		None	None		Min	Min		None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		7.1			7.1	17.8	30.4	30.4		37.0	42.1	
Actuated g/C Ratio		0.12			0.12	0.29	0.49	0.49		0.60	0.68	
v/c Ratio		0.19			0.11	0.32	0.02	0.70		0.47	0.43	
Control Delay		33.7			33.6	19.3	11.2	18.7		14.6	7.0	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		33.7			33.6	19.3	11.2	18.7		14.6	7.0	
LOS		C			C	B	B	B		B	A	
Approach Delay		33.7			20.8			18.6			9.0	
Approach LOS		C			C			B			A	
Queue Length 50th (ft)		9			5	31	1	127		13	48	
Queue Length 95th (ft)		55			33	104	12	481		85	276	
Internal Link Dist (ft)		499			510			1142			504	
Turn Bay Length (ft)						200	80			120		
Base Capacity (vph)		286			247	552	659	1709		680	1555	
Starvation Cap Reductn		0			0	0	0	0		0	90	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.12			0.07	0.26	0.01	0.37		0.28	0.37	

Intersection Summary

Area Type: Other  
 Cycle Length: 131.4  
 Actuated Cycle Length: 61.5  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.70  
 Intersection Signal Delay: 14.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 66.3%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 15: S Main St (RT 177) & Railroad Ave/New Britain Ave



Lane Group	Ø3
Total Split (%)	18%
Maximum Green (s)	19.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	4
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

Farmington Connectivity Study  
 16: S Main St (RT 177) & Webster St

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	43	73	19	606	503	36
Future Volume (vph)	43	73	19	606	503	36
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	0.915				0.991	
Flt Protected	0.982			0.999		
Satd. Flow (prot)	1642	0	0	1825	1810	0
Flt Permitted	0.982			0.999		
Satd. Flow (perm)	1642	0	0	1825	1810	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	805			584	1222	
Travel Time (s)	22.0			15.9	33.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	44	74	19	618	513	37
Shared Lane Traffic (%)						
Lane Group Flow (vph)	118	0	0	637	550	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	60.8%
ICU Level of Service	B
Analysis Period (min)	15

Farmington Connectivity Study  
 16: S Main St (RT 177) & Webster St

Existing Conditions  
 AM PEAK



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	43	73	19	606	503	36
Future Volume (Veh/h)	43	73	19	606	503	36
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	44	74	19	618	513	37
<b>Pedestrians</b>						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				1222		
pX, platoon unblocked	0.97	0.97	0.97			
vC, conflicting volume	1188	532	550			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1179	506	525			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	78	86	98			
cM capacity (veh/h)	199	548	1005			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	118	637	550			
Volume Left	44	19	0			
Volume Right	74	0	37			
cSH	332	1005	1700			
Volume to Capacity	0.36	0.02	0.32			
Queue Length 95th (ft)	39	1	0			
Control Delay (s)	21.7	0.5	0.0			
Lane LOS	C	A				
Approach Delay (s)	21.7	0.5	0.0			
Approach LOS	C					
<b>Intersection Summary</b>						
Average Delay			2.2			
Intersection Capacity Utilization			60.8%	ICU Level of Service	B	
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	43	73	19	606	503	36
Future Vol, veh/h	43	73	19	606	503	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	44	74	19	618	513	37

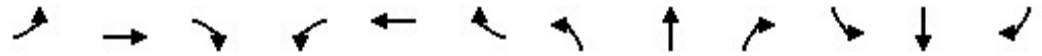
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1188	532	550	0	-	0
Stage 1	532	-	-	-	-	-
Stage 2	656	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.14	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.236	-	-	-
Pot Cap-1 Maneuver	206	544	1010	-	-	-
Stage 1	585	-	-	-	-	-
Stage 2	513	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	200	544	1010	-	-	-
Mov Cap-2 Maneuver	200	-	-	-	-	-
Stage 1	568	-	-	-	-	-
Stage 2	513	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21.7	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1010	-	332	-	-
HCM Lane V/C Ratio	0.019	-	0.357	-	-
HCM Control Delay (s)	8.6	0	21.7	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.6	-	-

Farmington Connectivity Study  
 17: Plainville Ave (RT 177) & Coopermine Rd

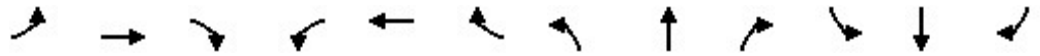
Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	154	69	52	36	22	14	29	454	39	40	587	93
Future Volume (vph)	154	69	52	36	22	14	29	454	39	40	587	93
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	1.00	1.00	1.00	1.00	1.00
Frt		0.974			0.974			0.990			0.983	
Flt Protected		0.973			0.976			0.997			0.997	
Satd. Flow (prot)	0	1783		0	1788		0	1857		0	1844	
Flt Permitted		0.802			0.761			0.930			0.944	
Satd. Flow (perm)	0	1469		0	1394		0	1732		0	1746	
Right Turn on Red		Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		12			12			6			11	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		498			472			529			491	
Travel Time (s)		9.7			9.2			10.3			9.6	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	175	78	59	41	25	16	33	516	44	45	667	106
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	312		0	82		0	593		0	818	
Number of Detectors	1	3		1	3		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	24		20	24		20	361		20	361	
Trailing Detector (ft)	0	-10		0	-10		0	185		0	185	
Detector 1 Position(ft)	0	-10		0	-10		0	185		0	185	
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)		6			6			355			355	
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	
Detector 3 Position(ft)		18			18							
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	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	20.5	20.5		20.5	20.5		21.9	21.9		21.9	21.9	
Total Split (s)	40.5	40.5		40.5	40.5		66.9	66.9		66.9	66.9	

Farmington Connectivity Study  
 17: Plainville Ave (RT 177) & Coopermine Rd

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	37.7%	37.7%		37.7%	37.7%		62.3%	62.3%		62.3%	62.3%	
Maximum Green (s)	35.0	35.0		35.0	35.0		60.0	60.0		60.0	60.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		4.4	4.4		4.4	4.4	
All-Red Time (s)	2.2	2.2		2.2	2.2		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.5			5.5			6.9			6.9	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5		1.5	1.5		5.0	5.0		5.0	5.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	14.0	14.0		14.0	14.0							
Flash Dont Walk (s)	1.0	1.0		1.0	1.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		23.3			23.3			55.1			55.1	
Actuated g/C Ratio		0.26			0.26			0.60			0.60	
v/c Ratio		0.81			0.23			0.57			0.77	
Control Delay		49.0			25.9			14.5			21.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		49.0			25.9			14.5			21.0	
LOS		D			C			B			C	
Approach Delay		49.0			25.9			14.5			21.0	
Approach LOS		D			C			B			C	
Queue Length 50th (ft)		175			34			187			317	
Queue Length 95th (ft)		265			70			356			604	
Internal Link Dist (ft)		418			392			449			411	
Turn Bay Length (ft)												
Base Capacity (vph)		593			563			1186			1197	
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		0.53			0.15			0.50			0.68	

Intersection Summary

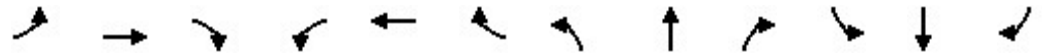
Area Type: Other  
 Cycle Length: 107.4  
 Actuated Cycle Length: 91.3  
 Natural Cycle: 70  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.81  
 Intersection Signal Delay: 23.9  
 Intersection Capacity Utilization 79.8%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service D

Splits and Phases: 17: Plainville Ave (RT 177) & Coopermine Rd



Farmington Connectivity Study  
 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd

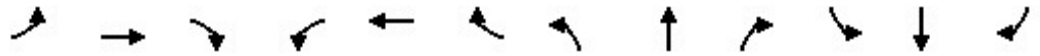
Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (vph)	39	177	236	13	35	23	90	445	29	71	670	18
Future Volume (vph)	39	177	236	13	35	23	90	445	29	71	670	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	250		0	80		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			100			40		
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		0.930			0.957			0.991			0.996	
Flt Protected		0.996			0.991		0.950			0.950		
Satd. Flow (prot)	0	1725	0	0	1767	0	1770	1846	0	1770	1855	0
Flt Permitted		0.970			0.919		0.143			0.367		
Satd. Flow (perm)	0	1680	0	0	1638	0	266	1846	0	684	1855	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					19			4			2	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		594			761			713			527	
Travel Time (s)		13.5			17.3			10.8			8.0	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	40	181	241	13	36	23	92	454	30	72	684	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	462	0	0	72	0	92	484	0	72	702	0
Number of Detectors	1	3		1	2		3	1		3	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	18		20	12		24	356		24	206	
Trailing Detector (ft)	0	-10		0	-6		-6	350		-6	200	
Detector 1 Position(ft)	0	-10		0	-6		-6	350		-6	200	
Detector 1 Size(ft)	20	6		20	6		6	6		6	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)		0			6		6			6		
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		
Detector 3 Position(ft)		12					18			18		
Detector 3 Size(ft)		6					6			6		
Detector 3 Type		Cl+Ex					Cl+Ex			Cl+Ex		
Detector 3 Channel												
Detector 3 Extend (s)		0.0					0.0			0.0		
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		3.0	30.0		3.0	30.0	

Farmington Connectivity Study  
 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd

Existing Conditions  
 AM PEAK

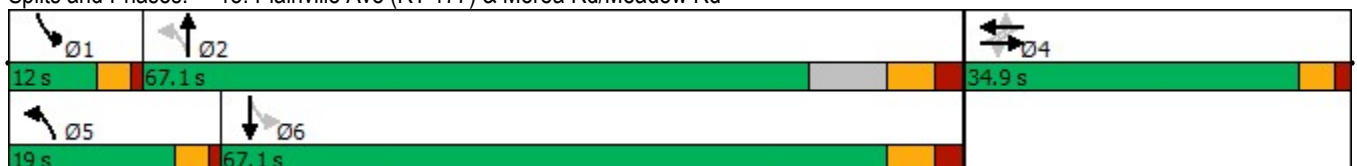


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	30.9	30.9		30.9	30.9		7.0	37.1		7.0	37.1	
Total Split (s)	34.9	34.9		34.9	34.9		19.0	67.1		12.0	67.1	
Total Split (%)	28.8%	28.8%		28.8%	28.8%		15.7%	55.5%		9.9%	55.5%	
Maximum Green (s)	30.0	30.0		30.0	30.0		15.0	60.0		8.0	60.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.0	4.4		3.0	4.4	
All-Red Time (s)	1.6	1.6		1.6	1.6		1.0	2.7		1.0	2.7	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.9			4.9		4.0	7.1		4.0	7.1	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)	25.0	25.0		25.0	25.0							
Flash Dont Walk (s)	1.0	1.0		1.0	1.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		30.8			30.8		53.8	44.2		50.9	42.8	
Actuated g/C Ratio		0.32			0.32		0.56	0.46		0.53	0.45	
v/c Ratio		0.85			0.13		0.34	0.56		0.17	0.84	
Control Delay		50.1			23.2		11.2	21.0		8.7	33.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		50.1			23.2		11.2	21.0		8.7	33.9	
LOS		D			C		B	C		A	C	
Approach Delay		50.1			23.2			19.5			31.5	
Approach LOS		D			C			B			C	
Queue Length 50th (ft)		264			23		22	208		17	372	
Queue Length 95th (ft)		#591			70		41	305		33	554	
Internal Link Dist (ft)		514			681			633			447	
Turn Bay Length (ft)							250			80		
Base Capacity (vph)		543			542		397	1333		467	1199	
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		0.85			0.13		0.23	0.36		0.15	0.59	

Intersection Summary

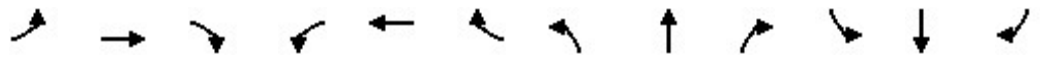
Area Type: Other  
 Cycle Length: 121  
 Actuated Cycle Length: 95.4  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 32.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 84.1%  
 ICU Level of Service E  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd



Farmington Connectivity Study  
 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	642	134	73	299	66	81	368	86	232	682	85
Future Volume (vph)	100	642	134	73	299	66	81	368	86	232	682	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260		260	180		0	250		250	165		165
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (ft)	190			170			150			115		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor			0.99	1.00			1.00			1.00	1.00	
Frt			0.850		0.973				0.850		0.983	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	3444	0	1770	1863	1583	1770	3473	0
Flt Permitted	0.950			0.950			0.185			0.163		
Satd. Flow (perm)	1770	1863	1563	1767	3444	0	344	1863	1583	304	3473	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			106		17				88		8	
Link Speed (mph)		45			45			40			45	
Link Distance (ft)		780			1567			643			474	
Travel Time (s)		11.8			23.7			11.0			7.2	
Confl. Peds. (#/hr)			1	1			3		1	1		3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	108	690	144	78	322	71	87	396	92	249	733	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	108	690	144	78	393	0	87	396	92	249	824	0
Number of Detectors	3	2	2	3	2		3	3	3	3	3	
Detector Template												
Leading Detector (ft)	24	306	306	24	306		24	24	24	24	24	
Trailing Detector (ft)	-6	150	150	-6	150		-6	-6	-6	-6	-6	
Detector 1 Position(ft)	-6	150	150	-6	150		-6	-6	-6	-6	-6	
Detector 1 Size(ft)	6	6	6	6	6		6	6	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	6	300	300	6	300		6	6	6	6	6	
Detector 2 Size(ft)	6	6	6	6	6		6	6	6	6	6	
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 3 Position(ft)	18			18			18	18	18	18	18	
Detector 3 Size(ft)	6			6			6	6	6	6	6	
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0	0.0	0.0	0.0	
Turn Type	Prot	NA	custom	Prot	NA		pm+pt	NA	pt+ov	pm+pt	NA	
Protected Phases	1	6	6	5	2		3	8	5 8	7	4	
Permitted Phases			6				8			4		
Detector Phase	1	6	6	5	2		3	8	8	7	4	

Lane Group	Ø9
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	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	

Farmington Connectivity Study  
 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
<b>Switch Phase</b>												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0		5.0	9.0		5.0	9.0	
Minimum Split (s)	9.0	20.2	20.2	9.0	20.2		9.0	14.7		9.0	14.7	
Total Split (s)	14.0	45.2	45.2	14.0	35.2		19.0	40.7		19.0	40.7	
Total Split (%)	9.3%	30.0%	30.0%	9.3%	23.3%		12.6%	27.0%		12.6%	27.0%	
Maximum Green (s)	10.0	40.0	40.0	10.0	30.0		15.0	35.0		15.0	35.0	
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2		3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.2		1.0	1.2	
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)	4.0	5.2	5.2	4.0	5.2		4.0	5.7		4.0	5.7	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	2.5	2.5	1.5	2.5		2.0	3.0		2.0	2.0	
Recall Mode	None	Min	Min	None	Min		None	None		None	None	
<b>Walk Time (s)</b>												
<b>Flash Dont Walk (s)</b>												
<b>Pedestrian Calls (#/hr)</b>												
Act Effct Green (s)	10.0	40.7	40.7	8.7	39.3		41.0	31.1	44.9	51.8	38.1	
Actuated g/C Ratio	0.08	0.34	0.34	0.07	0.33		0.34	0.26	0.37	0.43	0.32	
v/c Ratio	0.73	1.09	0.24	0.61	0.35		0.40	0.82	0.14	0.79	0.74	
Control Delay	83.5	102.2	12.3	77.6	32.3		29.0	57.7	5.0	43.6	42.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	83.5	102.2	12.3	77.6	32.3		29.0	57.7	5.0	43.6	42.4	
LOS	F	F	B	E	C		C	E	A	D	D	
Approach Delay		86.3			39.8			44.9			42.7	
Approach LOS		F			D			D			D	
Queue Length 50th (ft)	80	~572	19	57	108		36	271	2	114	274	
Queue Length 95th (ft)	#231	#1151	88	#154	214		99	#580	29	#351	#557	
Internal Link Dist (ft)		700			1487			563			394	
Turn Bay Length (ft)	260		260	180			250		250	165		
Base Capacity (vph)	149	631	606	149	1178		319	552	647	317	1118	
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	0.72	1.09	0.24	0.52	0.33		0.27	0.72	0.14	0.79	0.74	










**Intersection Summary**

Area Type: Other  
 Cycle Length: 150.9  
 Actuated Cycle Length: 119.9  
 Natural Cycle: 145  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.09  
 Intersection Signal Delay: 56.1  
 Intersection LOS: E  
 Intersection Capacity Utilization 85.9%  
 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.

Lane Group	Ø9
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	32.0
Total Split (s)	32.0
Total Split (%)	21%
Maximum Green (s)	28.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
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)	21.0
Pedestrian Calls (#/hr)	7
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

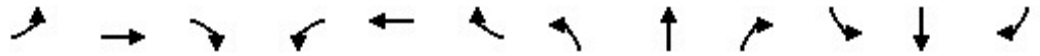
Queue shown is maximum after two cycles.

Splits and Phases: 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)

 Ø1	 Ø2	 Ø3	 Ø4	 Ø9
14 s	35.2 s	19 s	40.7 s	32 s
 Ø5	 Ø6	 Ø7	 Ø8	
14 s	45.2 s	19 s	40.7 s	

Farmington Connectivity Study  
 20: Unionville Ave (RT 177) & Northwest Dr

Existing Conditions  
 AM PEAK

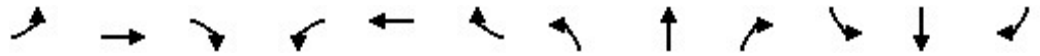


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	151	70	39	113	48	159	505	153	98	698	42
Future Volume (vph)	27	151	70	39	113	48	159	505	153	98	698	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	210		0	260		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
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		0.952			0.955			0.965			0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	1739	0	1736	1745	0	1736	3350	0	1736	3443	0
Flt Permitted	0.643			0.441			0.212			0.331		
Satd. Flow (perm)	1175	1739	0	806	1745	0	387	3350	0	605	3443	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			15			30			5	
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		710			592			572			675	
Travel Time (s)		13.8			11.5			9.8			11.5	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	30	170	79	44	127	54	179	567	172	110	784	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	30	249	0	44	181	0	179	739	0	110	831	0
Number of Detectors	3	3		3	3		3	2		3	2	
Detector Template												
Leading Detector (ft)	24	24		24	24		24	331		24	331	
Trailing Detector (ft)	-6	-6		-6	-6		-6	150		-6	150	
Detector 1 Position(ft)	-6	-6		-6	-6		-6	150		-6	150	
Detector 1 Size(ft)	6	6		6	6		6	6		6	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)	6	6		6	6		6	325		6	325	
Detector 2 Size(ft)	6	6		6	6		6	6		6	6	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 3 Position(ft)	18	18		18	18		18			18		
Detector 3 Size(ft)	6	6		6	6		6			6		
Detector 3 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex		
Detector 3 Channel												
Detector 3 Extend (s)	0.0	0.0		0.0	0.0		0.0			0.0		
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	
Switch Phase												

Lane Group	Ø9
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)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	

Farmington Connectivity Study  
 20: Unionville Ave (RT 177) & Northwest Dr

Existing Conditions  
 AM PEAK

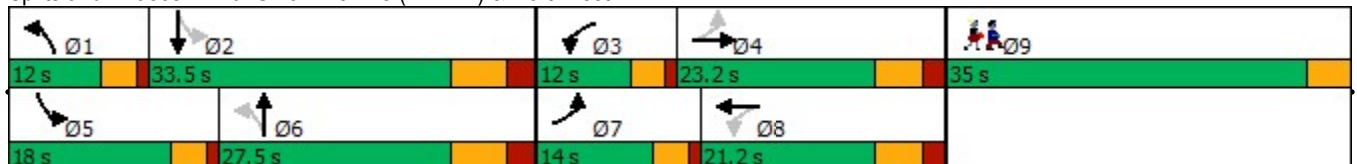


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	9.0		4.0	9.0		4.0	15.0		4.0	15.0	
Minimum Split (s)	8.0	15.2		8.0	15.2		8.0	22.5		8.0	22.5	
Total Split (s)	14.0	23.2		12.0	21.2		12.0	27.5		18.0	33.5	
Total Split (%)	12.1%	20.1%		10.4%	18.3%		10.4%	23.8%		15.6%	29.0%	
Maximum Green (s)	10.0	17.0		8.0	15.0		8.0	20.0		14.0	26.0	
Yellow Time (s)	3.0	4.1		3.0	4.1		3.0	4.8		3.0	4.8	
All-Red Time (s)	1.0	2.1		1.0	2.1		1.0	2.7		1.0	2.7	
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	6.2		4.0	6.2		4.0	7.5		4.0	7.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	3.0		1.5	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	21.3	15.8		22.6	17.8		39.5	29.7		36.3	26.2	
Actuated g/C Ratio	0.29	0.21		0.31	0.24		0.54	0.40		0.49	0.36	
v/c Ratio	0.08	0.65		0.14	0.42		0.51	0.54		0.28	0.68	
Control Delay	16.6	34.4		17.3	25.9		14.7	20.5		11.1	24.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	16.6	34.4		17.3	25.9		14.7	20.5		11.1	24.6	
LOS	B	C		B	C		B	C		B	C	
Approach Delay		32.5			24.2			19.4			23.1	
Approach LOS		C			C			B			C	
Queue Length 50th (ft)	9	103		14	58		43	148		25	185	
Queue Length 95th (ft)	25	180		33	130		79	218		51	254	
Internal Link Dist (ft)		630			512			492			595	
Turn Bay Length (ft)							210			260		
Base Capacity (vph)	451	417		353	448		354	1367		559	1227	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.07	0.60		0.12	0.40		0.51	0.54		0.20	0.68	

Intersection Summary

Area Type: Other  
 Cycle Length: 115.7  
 Actuated Cycle Length: 73.8  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.68  
 Intersection Signal Delay: 22.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 63.1%  
 ICU Level of Service B  
 Analysis Period (min) 15

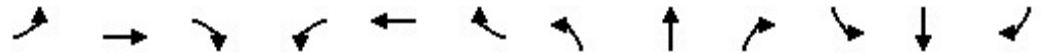
Splits and Phases: 20: Unionville Ave (RT 177) & Northwest Dr



Lane Group	Ø9
Minimum Initial (s)	1.0
Minimum Split (s)	35.0
Total Split (s)	35.0
Total Split (%)	30%
Maximum Green (s)	31.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
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)	24.0
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	
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	
<b>Intersection Summary</b>	

Farmington Connectivity Study  
 21: New Britain Ave & Red Oak Hill Rd

Existing Conditions  
 AM PEAK

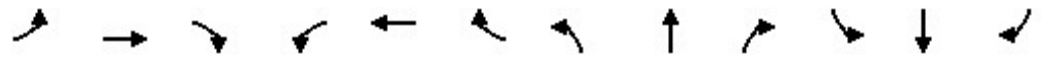


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	11	213	69	7	46	59	16	65	6	132	121	8
Future Volume (vph)	11	213	69	7	46	59	16	65	6	132	121	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.968			0.929			0.990			0.996	
Flt Protected		0.998			0.997			0.991			0.975	
Satd. Flow (prot)	0	1782	0	0	1709	0	0	1810	0	0	1791	0
Flt Permitted		0.998			0.997			0.991			0.975	
Satd. Flow (perm)	0	1782	0	0	1709	0	0	1810	0	0	1791	0
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		506			528			2775			1031	
Travel Time (s)		9.9			10.3			63.1			23.4	
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 (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	12	232	75	8	50	64	17	71	7	143	132	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	319	0	0	122	0	0	95	0	0	284	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	46.2% ICU Level of Service A
Analysis Period (min)	15

Farmington Connectivity Study  
 21: New Britain Ave & Red Oak Hill Rd

Existing Conditions  
 AM PEAK



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	11	213	69	7	46	59	16	65	6	132	121	8
Future Volume (vph)	11	213	69	7	46	59	16	65	6	132	121	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
Hourly flow rate (vph)	12	232	75	8	50	64	17	71	7	143	132	9

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	319	122	95	284
Volume Left (vph)	12	8	17	143
Volume Right (vph)	75	64	7	9
Hadj (s)	-0.08	-0.25	0.04	0.13
Departure Headway (s)	5.1	5.2	5.6	5.4
Degree Utilization, x	0.45	0.18	0.15	0.42
Capacity (veh/h)	668	622	567	628
Control Delay (s)	12.2	9.3	9.6	12.2
Approach Delay (s)	12.2	9.3	9.6	12.2
Approach LOS	B	A	A	B

Intersection Summary			
Delay		11.5	
Level of Service		B	
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	11.5
Intersection LOS	B

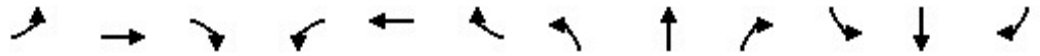
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	213	69	7	46	59	16	65	6	132	121	8
Future Vol, veh/h	11	213	69	7	46	59	16	65	6	132	121	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	12	232	75	8	50	64	17	71	7	143	132	9
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.2	9.3	9.6	12.2
HCM LOS	B	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	18%	4%	6%	51%
Vol Thru, %	75%	73%	41%	46%
Vol Right, %	7%	24%	53%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	87	293	112	261
LT Vol	16	11	7	132
Through Vol	65	213	46	121
RT Vol	6	69	59	8
Lane Flow Rate	95	318	122	284
Geometry Grp	1	1	1	1
Degree of Util (X)	0.146	0.45	0.176	0.421
Departure Headway (Hd)	5.574	5.086	5.19	5.347
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	642	713	690	672
Service Time	3.617	3.086	3.225	3.38
HCM Lane V/C Ratio	0.148	0.446	0.177	0.423
HCM Control Delay	9.6	12.2	9.3	12.2
HCM Lane LOS	A	B	A	B
HCM 95th-tile Q	0.5	2.3	0.6	2.1

Farmington Connectivity Study  
 22: New Britain Ave & Meadow Rd

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	49	153	80	17	53	0	29	108	8	0	163	39
Future Volume (vph)	49	153	80	17	53	0	29	108	8	0	163	39
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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.962						0.992			0.974	
Flt Protected		0.991			0.988			0.990				
Satd. Flow (prot)	0	1725	0	0	1788	0	0	1777	0	0	1762	0
Flt Permitted		0.991			0.988			0.990				
Satd. Flow (perm)	0	1725	0	0	1788	0	0	1777	0	0	1762	0
Link Speed (mph)		30			35			30			30	
Link Distance (ft)		414			396			469			2775	
Travel Time (s)		9.4			7.7			10.7			63.1	
Confl. Peds. (#/hr)							2		1	1		2
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	60	189	99	21	65	0	36	133	10	0	201	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	348	0	0	86	0	0	179	0	0	249	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	48.1%
Analysis Period (min)	15
	ICU Level of Service A

Farmington Connectivity Study  
 22: New Britain Ave & Meadow Rd

Existing Conditions  
 AM PEAK



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	49	153	80	17	53	0	29	108	8	0	163	39
Future Volume (vph)	49	153	80	17	53	0	29	108	8	0	163	39
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	60	189	99	21	65	0	36	133	10	0	201	48

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	348	86	179	249
Volume Left (vph)	60	21	36	0
Volume Right (vph)	99	0	10	48
Hadj (s)	-0.05	0.13	0.09	-0.03
Departure Headway (s)	5.2	5.8	5.6	5.4
Degree Utilization, x	0.50	0.14	0.28	0.37
Capacity (veh/h)	653	544	579	619
Control Delay (s)	13.3	9.8	10.8	11.6
Approach Delay (s)	13.3	9.8	10.8	11.6
Approach LOS	B	A	B	B

Intersection Summary			
Delay		11.9	
Level of Service		B	
Intersection Capacity Utilization	48.1%	ICU Level of Service	A
Analysis Period (min)		15	

Intersection	
Intersection Delay, s/veh	11.9
Intersection LOS	B

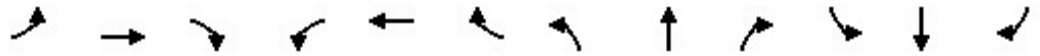
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	49	153	80	17	53	0	29	108	8	0	163	39
Future Vol, veh/h	49	153	80	17	53	0	29	108	8	0	163	39
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	60	189	99	21	65	0	36	133	10	0	201	48
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.3	9.8	10.8	11.6
HCM LOS	B	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	20%	17%	24%	0%
Vol Thru, %	74%	54%	76%	81%
Vol Right, %	6%	28%	0%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	145	282	70	202
LT Vol	29	49	17	0
Through Vol	108	153	53	163
RT Vol	8	80	0	39
Lane Flow Rate	179	348	86	249
Geometry Grp	1	1	1	1
Degree of Util (X)	0.278	0.501	0.139	0.372
Departure Headway (Hd)	5.596	5.184	5.798	5.365
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	641	696	617	671
Service Time	3.638	3.22	3.847	3.403
HCM Lane V/C Ratio	0.279	0.5	0.139	0.371
HCM Control Delay	10.8	13.3	9.8	11.6
HCM Lane LOS	B	B	A	B
HCM 95th-tile Q	1.1	2.8	0.5	1.7

Farmington Connectivity Study  
 23: New Britain Ave & Scott Swamp Rd (US 6)

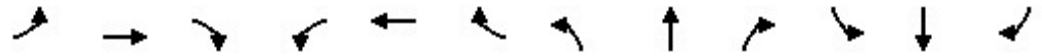
Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	807	26	13	505	118	18	36	12	146	68	28
Future Volume (vph)	24	807	26	13	505	118	18	36	12	146	68	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	340		0	100		320	190		0	120		0
Storage Lanes	1		0	1		1	1		0	2		0
Taper Length (ft)	150			100			100			110		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.995				0.850		0.962			0.956	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3522	0	1770	3539	1583	1770	1792	0	3433	1781	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3522	0	1770	3539	1583	1770	1792	0	3433	1781	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				139		14				22
Link Speed (mph)		45			45			25				35
Link Distance (ft)		3978			920			676				631
Travel Time (s)		60.3			13.9			18.4				12.3
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	28	949	31	15	594	139	21	42	14	172	80	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	28	980	0	15	594	139	21	56	0	172	113	0
Number of Detectors	3	0		3	0	0	3	3		3	3	
Detector Template												
Leading Detector (ft)	24	0		24	0	0	24	24		24	24	
Trailing Detector (ft)	-10	0		-10	0	0	-6	-6		-6	-6	
Detector 1 Position(ft)	-10	0		-10	0	0	-6	-6		-6	-6	
Detector 1 Size(ft)	6	6		6	6	20	6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
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)	6			6			6	6		6	6	
Detector 2 Size(ft)	6			6			6	6		6	6	
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0		0.0	0.0	
Detector 3 Position(ft)	18			18			18	18		18	18	
Detector 3 Size(ft)	6			6			6	6		6	6	
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0		0.0	0.0	
Turn Type	Prot	NA		Prot	NA	pt+ov	Split	NA		Split	NA	
Protected Phases	1	6		5	2	2 7	8	8		7	7	
Permitted Phases												
Detector Phase	1	6		5	2	2	8	8		7	7	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0		7.0	7.0	

Farmington Connectivity Study  
 23: New Britain Ave & Scott Swamp Rd (US 6)

Existing Conditions  
 AM PEAK

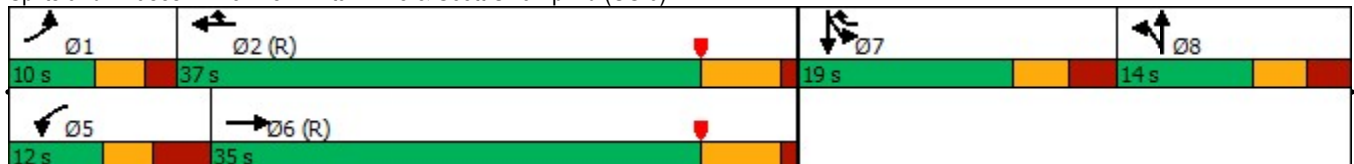


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.9	20.8		11.4	20.8		34.0	34.0		13.2	13.2	
Total Split (s)	10.0	35.0		12.0	37.0		14.0	14.0		19.0	19.0	
Total Split (%)	12.5%	43.8%		15.0%	46.3%		17.5%	17.5%		23.8%	23.8%	
Maximum Green (s)	5.1	29.2		5.6	31.2		8.0	8.0		12.8	12.8	
Yellow Time (s)	3.0	4.8		3.0	4.8		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.9	1.0		3.4	1.0		2.7	2.7		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.9	5.8		6.4	5.8		6.0	6.0		6.2	6.2	
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)							27.0	27.0				
Flash Dont Walk (s)							1.0	1.0				
Pedestrian Calls (#/hr)							0	0				
Act Effect Green (s)	5.5	46.2		5.3	44.3	60.8	6.5	6.5		9.2	9.2	
Actuated g/C Ratio	0.07	0.58		0.07	0.55	0.76	0.08	0.08		0.12	0.12	
v/c Ratio	0.23	0.48		0.13	0.30	0.11	0.15	0.35		0.44	0.51	
Control Delay	40.0	13.4		34.8	13.3	4.5	35.8	33.8		36.1	34.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	40.0	13.4		34.8	13.3	4.5	35.8	33.8		36.1	34.3	
LOS	D	B		C	B	A	D	C		D	C	
Approach Delay		14.1			12.1			34.4			35.3	
Approach LOS		B			B			C			D	
Queue Length 50th (ft)	14	133		7	54	0	10	20		42	44	
Queue Length 95th (ft)	36	269		25	176	61	29	50		64	82	
Internal Link Dist (ft)		3898			840			596			551	
Turn Bay Length (ft)	340			100		320	190			120		
Base Capacity (vph)	122	2034		124	1957	1236	178	192		549	303	
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	0.23	0.48		0.12	0.30	0.11	0.12	0.29		0.31	0.37	

Intersection Summary

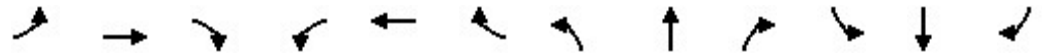
Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 43 (54%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.51  
 Intersection Signal Delay: 17.0  
 Intersection LOS: B  
 Intersection Capacity Utilization 44.0%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 23: New Britain Ave & Scott Swamp Rd (US 6)



Farmington Connectivity Study  
 24: Hyde Rd & Scott Swamp Rd (US 6)

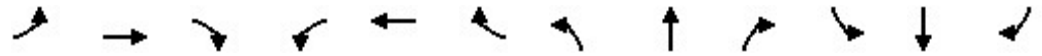
Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	982	11	131	628	12	4	5	38	1	1	1
Future Volume (vph)	10	982	11	131	628	12	4	5	38	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		0	360		0	0		0	0		0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	100			65			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.997				0.850			0.850
Flt Protected	0.950			0.950				0.978			0.976	
Satd. Flow (prot)	1787	3567	0	1787	3564	0	0	1840	1599	0	1836	1599
Flt Permitted	0.950			0.950								
Satd. Flow (perm)	1787	3567	0	1787	3564	0	0	1881	1599	0	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			4				45			113
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1090			523			762			370	
Travel Time (s)		16.5			7.9			20.8			10.1	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	12	1155	13	154	739	14	5	6	45	1	1	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	1168	0	154	753	0	0	11	45	0	2	1
Number of Detectors	3	0		3	0		1	3	3	1	3	3
Detector Template							Left			Left		
Leading Detector (ft)	24	0		24	0		20	24	24	20	24	24
Trailing Detector (ft)	-10	0		-10	0		0	-10	-10	0	-10	-10
Detector 1 Position(ft)	-10	0		-10	0		0	-10	-10	0	-10	-10
Detector 1 Size(ft)	6	6		6	6		20	6	6	20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	6			6			6	6	6		6	6
Detector 2 Size(ft)	6			6			6	6	6		6	6
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0	0.0		0.0	0.0
Detector 3 Position(ft)	18			18			18	18	18		18	18
Detector 3 Size(ft)	6			6			6	6	6		6	6
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	NA		Prot	NA		Perm	NA	pm+ov	Perm	NA	Perm
Protected Phases	1	6		5	2			4	5		4	
Permitted Phases							4		4	4		4
Detector Phase	1	6		5	2		4	4	5	4	4	4
Switch Phase												

Farmington Connectivity Study  
 24: Hyde Rd & Scott Swamp Rd (US 6)

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0		7.0	7.0	5.0	7.0	7.0	7.0
Minimum Split (s)	10.5	21.8		10.5	21.8		30.5	30.5	10.5	30.5	30.5	30.5
Total Split (s)	15.0	50.0		15.0	50.0		15.0	15.0	15.0	15.0	15.0	15.0
Total Split (%)	18.8%	62.5%		18.8%	62.5%		18.8%	18.8%	18.8%	18.8%	18.8%	18.8%
Maximum Green (s)	9.5	44.2		9.5	44.2		9.5	9.5	9.5	9.5	9.5	9.5
Yellow Time (s)	3.0	4.8		3.0	4.8		3.3	3.3	3.0	3.3	3.3	3.3
All-Red Time (s)	2.5	1.0		2.5	1.0		2.2	2.2	2.5	2.2	2.2	2.2
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)	5.5	5.8		5.5	5.8		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	None
Walk Time (s)		15.0			15.0		24.0	24.0		24.0	24.0	24.0
Flash Dont Walk (s)		1.0			1.0		1.0	1.0		1.0	1.0	1.0
Pedestrian Calls (#/hr)		0			0		0	0		0	0	0
Act Effct Green (s)	5.4	53.1		10.6	70.3			7.0	15.6		7.0	7.0
Actuated g/C Ratio	0.07	0.66		0.13	0.88		0.09	0.20		0.09	0.09	0.09
v/c Ratio	0.10	0.49		0.65	0.24		0.07	0.13		0.01	0.01	0.00
Control Delay	44.3	4.5		43.4	3.8		34.7	7.6		33.5	0.0	0.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	44.3	4.5		43.4	3.8		34.7	7.6		33.5	0.0	0.0
LOS	D	A		D	A		C	A		C	A	A
Approach Delay		4.9			10.5		12.9				22.3	
Approach LOS		A			B		B				C	
Queue Length 50th (ft)	6	21		75	0		5	0		1	0	0
Queue Length 95th (ft)	m15	43		127	116		20	20		7	0	0
Internal Link Dist (ft)		1010			443		682			290		
Turn Bay Length (ft)	130			360								
Base Capacity (vph)	212	2367		247	3132		223	357		223	289	
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	0.06	0.49		0.62	0.24		0.05	0.13		0.01	0.00	

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 2 (3%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.65  
 Intersection Signal Delay: 7.5 Intersection LOS: A  
 Intersection Capacity Utilization 54.6% ICU Level of Service A  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 24: Hyde Rd & Scott Swamp Rd (US 6)

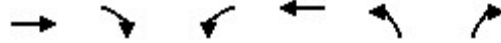
 Ø1	 Ø2 (R)	 Ø4
15 s	50 s	15 s
 Ø5	 Ø6 (R)	
15 s	50 s	

Farmington Connectivity Study  
 25: Scott Swamp Rd (RT 552) & Scott Swamp Rd (US 6)/Colt Hwy (US 6)

Existing Conditions  
 AM PEAK



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	
Traffic Volume (vph)	921	168	86	603	156	14
Future Volume (vph)	921	168	86	603	156	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		350	350		380	0
Storage Lanes		1	1		1	0
Taper Length (ft)			100		130	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	0.95
Frt		0.850			0.988	
Flt Protected			0.950		0.956	
Satd. Flow (prot)	3539	1583	1770	3539	3413	0
Flt Permitted			0.950		0.956	
Satd. Flow (perm)	3539	1583	1770	3539	3413	0
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			45	30	
Link Distance (ft)	1087			600	782	
Travel Time (s)	16.5			9.1	17.8	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	1084	198	101	709	184	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1084	198	101	709	200	0
Number of Detectors	0	0	3	0	1	
Detector Template						
Leading Detector (ft)	0	0	24	0	56	
Trailing Detector (ft)	0	0	-10	0	50	
Detector 1 Position(ft)	0	0	-10	0	50	
Detector 1 Size(ft)	6	20	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)			6			
Detector 2 Size(ft)			6			
Detector 2 Type			Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)			0.0			
Detector 3 Position(ft)			18			
Detector 3 Size(ft)			6			
Detector 3 Type			Cl+Ex			
Detector 3 Channel						
Detector 3 Extend (s)			0.0			
Turn Type	NA	pm+ov	Prot	NA	Prot	
Protected Phases	2	3	1	12	3	
Permitted Phases		2				
Detector Phase	2	3	1	2	3	
Switch Phase						
Minimum Initial (s)	15.0	7.0	5.0		7.0	

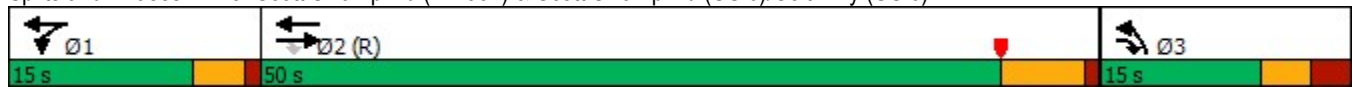


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	21.0	29.5	9.0		29.5	
Total Split (s)	50.0	15.0	15.0		15.0	
Total Split (%)	62.5%	18.8%	18.8%		18.8%	
Maximum Green (s)	44.0	9.5	11.0		9.5	
Yellow Time (s)	5.0	3.0	3.0		3.0	
All-Red Time (s)	1.0	2.5	1.0		2.5	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.0	5.5	4.0		5.5	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	2.0		3.0	
Recall Mode	C-Max	None	Min		None	
Walk Time (s)		23.0			23.0	
Flash Dont Walk (s)		1.0			1.0	
Pedestrian Calls (#/hr)		0			0	
Act Effect Green (s)	47.4	61.9	8.6	62.0	8.5	
Actuated g/C Ratio	0.59	0.77	0.11	0.78	0.11	
v/c Ratio	0.52	0.16	0.53	0.26	0.55	
Control Delay	8.3	3.7	43.4	2.9	39.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	8.3	3.7	43.4	2.9	39.9	
LOS	A	A	D	A	D	
Approach Delay	7.6			7.9	39.9	
Approach LOS	A			A	D	
Queue Length 50th (ft)	210	58	48	40	49	
Queue Length 95th (ft)	53	20	88	53	76	
Internal Link Dist (ft)	1007			520	702	
Turn Bay Length (ft)		350	350		380	
Base Capacity (vph)	2094	1243	243	2742	405	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.52	0.16	0.42	0.26	0.49	

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 34 (43%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.55  
 Intersection Signal Delay: 10.5  
 Intersection Capacity Utilization 49.0%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service A

Splits and Phases: 25: Scott Swamp Rd (RT 552) & Scott Swamp Rd (US 6)/Colt Hwy (US 6)





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3
Lane Configurations							
Traffic Volume (vph)	340	91	77	343	237	105	
Future Volume (vph)	340	91	77	343	237	105	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor				1.00	0.99		
Frt	0.972				0.958		
Flt Protected	0.962			0.991			
Satd. Flow (prot)	1725	0	0	1828	1754	0	
Flt Permitted	0.962			0.625			
Satd. Flow (perm)	1725	0	0	1152	1754	0	
Right Turn on Red		No				Yes	
Satd. Flow (RTOR)					20		
Link Speed (mph)	30			30	30		
Link Distance (ft)	345			413	499		
Travel Time (s)	7.8			9.4	11.3		
Confl. Peds. (#/hr)			3			3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	
Adj. Flow (vph)	378	101	86	381	263	117	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	479	0	0	467	380	0	
Number of Detectors	2		1	1	1		
Detector Template			Left				
Leading Detector (ft)	18		20	206	206		
Trailing Detector (ft)	0		0	200	200		
Detector 1 Position(ft)	0		0	200	200		
Detector 1 Size(ft)	6		20	6	6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		
Detector 2 Position(ft)	12						
Detector 2 Size(ft)	6						
Detector 2 Type	Cl+Ex						
Detector 2 Channel							
Detector 2 Extend (s)	0.0						
Turn Type	Prot		D.P+P	NA	NA		
Protected Phases	4		1	12	2	3	
Permitted Phases			2				
Detector Phase	4		1	1	2		
Switch Phase							
Minimum Initial (s)	5.0		3.0		15.0	1.0	
Minimum Split (s)	9.0		7.0		22.2	25.0	
Total Split (s)	34.0		12.0		39.2	25.0	
Total Split (%)	30.9%		10.9%		35.6%	23%	
Maximum Green (s)	30.0		8.0		32.0	21.0	
Yellow Time (s)	3.0		3.0		4.1	4.0	



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3
All-Red Time (s)	1.0		1.0		3.1		0.0
Lost Time Adjust (s)	0.0				0.0		
Total Lost Time (s)	4.0				7.2		
Lead/Lag	Lag		Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	3.0		3.0		5.0		3.0
Recall Mode	None		Max		Min		None
Walk Time (s)							7.0
Flash Dont Walk (s)							14.0
Pedestrian Calls (#/hr)							3
Act Effct Green (s)	31.0			31.2	19.6		
Actuated g/C Ratio	0.40			0.40	0.25		
v/c Ratio	0.70			0.88	0.84		
Control Delay	29.9			39.8	43.9		
Queue Delay	0.0			0.0	0.0		
Total Delay	29.9			39.8	43.9		
LOS	C			D	D		
Approach Delay	29.9			39.8	43.9		
Approach LOS	C			D	D		
Queue Length 50th (ft)	160			140	150		
Queue Length 95th (ft)	#564			#462	342		
Internal Link Dist (ft)	265			333	419		
Turn Bay Length (ft)							
Base Capacity (vph)	684			531	753		
Starvation Cap Reductn	0			0	0		
Spillback Cap Reductn	0			0	0		
Storage Cap Reductn	0			0	0		
Reduced v/c Ratio	0.70			0.88	0.50		

Intersection Summary

Area Type: Other  
 Cycle Length: 110.2  
 Actuated Cycle Length: 78.2  
 Natural Cycle: 110  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.88  
 Intersection Signal Delay: 37.4  
 Intersection LOS: D  
 Intersection Capacity Utilization 78.3%  
 ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 26: Main St (RT 10) & Meadow Rd





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	16	28	11	110	157	7
Future Volume (vph)	16	28	11	110	157	7
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	0.914				0.994	
Flt Protected	0.982			0.995		
Satd. Flow (prot)	1656	0	0	1835	1834	0
Flt Permitted	0.982			0.995		
Satd. Flow (perm)	1656	0	0	1835	1834	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	203			213	257	
Travel Time (s)	4.6			4.8	5.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	17	30	12	120	171	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	47	0	0	132	179	0
Sign Control	Stop			Free	Free	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	24.9%
ICU Level of Service	A
Analysis Period (min)	15



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	16	28	11	110	157	7
Future Volume (Veh/h)	16	28	11	110	157	7
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	30	12	120	171	8
<b>Pedestrians</b>						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	319	175	179			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	319	175	179			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	97	99			
cM capacity (veh/h)	666	866	1391			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	47	132	179			
Volume Left	17	12	0			
Volume Right	30	0	8			
cSH	781	1391	1700			
Volume to Capacity	0.06	0.01	0.11			
Queue Length 95th (ft)	5	1	0			
Control Delay (s)	9.9	0.8	0.0			
Lane LOS	A	A				
Approach Delay (s)	9.9	0.8	0.0			
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay			1.6			
Intersection Capacity Utilization			24.9%	ICU Level of Service	A	
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	16	28	11	110	157	7
Future Vol, veh/h	16	28	11	110	157	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	17	30	12	120	171	8

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	319	175	179	0	0
Stage 1	175	-	-	-	-
Stage 2	144	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-
Pot Cap-1 Maneuver	672	866	1391	-	-
Stage 1	853	-	-	-	-
Stage 2	881	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	666	866	1391	-	-
Mov Cap-2 Maneuver	666	-	-	-	-
Stage 1	845	-	-	-	-
Stage 2	881	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	0.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1391	-	781	-	-
HCM Lane V/C Ratio	0.009	-	0.061	-	-
HCM Control Delay (s)	7.6	0	9.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	14	34	12	168	207	9
Future Volume (vph)	14	34	12	168	207	9
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	0.905				0.994	
Flt Protected	0.986			0.997		
Satd. Flow (prot)	1555	0	0	1738	1733	0
Flt Permitted	0.986			0.997		
Satd. Flow (perm)	1555	0	0	1738	1733	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	525			1031	566	
Travel Time (s)	11.9			23.4	12.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	9%	9%	9%	9%	9%	9%
Adj. Flow (vph)	15	36	13	179	220	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	51	0	0	192	230	0
Sign Control	Stop			Free	Free	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	28.7%
ICU Level of Service	A
Analysis Period (min)	15



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	14	34	12	168	207	9
Future Volume (Veh/h)	14	34	12	168	207	9
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	15	36	13	179	220	10
<b>Pedestrians</b>						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	430	225	230			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	430	225	230			
tC, single (s)	6.5	6.3	4.2			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.3			
p0 queue free %	97	95	99			
cM capacity (veh/h)	563	797	1298			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	51	192	230			
Volume Left	15	13	0			
Volume Right	36	0	10			
cSH	711	1298	1700			
Volume to Capacity	0.07	0.01	0.14			
Queue Length 95th (ft)	6	1	0			
Control Delay (s)	10.5	0.6	0.0			
Lane LOS	B	A				
Approach Delay (s)	10.5	0.6	0.0			
Approach LOS	B					
<b>Intersection Summary</b>						
Average Delay			1.4			
Intersection Capacity Utilization			28.7%	ICU Level of Service	A	
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	14	34	12	168	207	9
Future Vol, veh/h	14	34	12	168	207	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	9	9	9	9	9	9
Mvmt Flow	15	36	13	179	220	10

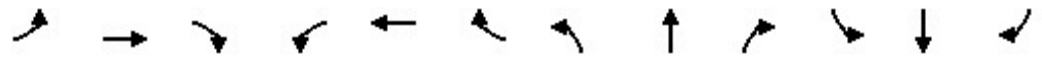
Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	430	225	230	0	0
Stage 1	225	-	-	-	-
Stage 2	205	-	-	-	-
Critical Hdwy	6.49	6.29	4.19	-	-
Critical Hdwy Stg 1	5.49	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-
Follow-up Hdwy	3.581	3.381	2.281	-	-
Pot Cap-1 Maneuver	569	797	1298	-	-
Stage 1	796	-	-	-	-
Stage 2	813	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	563	797	1298	-	-
Mov Cap-2 Maneuver	563	-	-	-	-
Stage 1	787	-	-	-	-
Stage 2	813	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.5	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1298	-	711	-	-
HCM Lane V/C Ratio	0.01	-	0.072	-	-
HCM Control Delay (s)	7.8	0	10.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Farmington Connectivity Study  
 29: Whispering Rod Rd/Chaffee Ln & W District Rd

Existing Conditions  
 AM PEAK

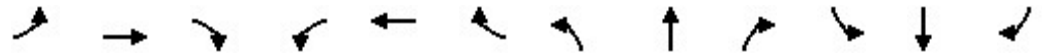


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	27	90	0	12	72	23	2	0	17	22	1	19
Future Volume (vph)	27	90	0	12	72	23	2	0	17	22	1	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.971			0.881				0.939
Flt Protected		0.989			0.994			0.994				0.974
Satd. Flow (prot)	0	1807	0	0	1763	0	0	1600	0	0	1671	0
Flt Permitted		0.989			0.994			0.994				0.974
Satd. Flow (perm)	0	1807	0	0	1763	0	0	1600	0	0	1671	0
Link Speed (mph)		30			30			30				30
Link Distance (ft)		379			364			336				296
Travel Time (s)		8.6			8.3			7.6				6.7
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	35	117	0	16	94	30	3	0	22	29	1	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	152	0	0	140	0	0	25	0	0	55	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	25.7%
Analysis Period (min)	15
	ICU Level of Service A

Farmington Connectivity Study  
 29: Whispering Rod Rd/Chaffee Ln & W District Rd

Existing Conditions  
 AM PEAK



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	27	90	0	12	72	23	2	0	17	22	1	19
Future Volume (vph)	27	90	0	12	72	23	2	0	17	22	1	19
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	35	117	0	16	94	30	3	0	22	29	1	25

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	152	140	25	55
Volume Left (vph)	35	16	3	29
Volume Right (vph)	0	30	22	25
Hadj (s)	0.11	-0.04	-0.44	-0.10
Departure Headway (s)	4.3	4.2	4.2	4.5
Degree Utilization, x	0.18	0.16	0.03	0.07
Capacity (veh/h)	808	833	794	743
Control Delay (s)	8.3	8.0	7.3	7.8
Approach Delay (s)	8.3	8.0	7.3	7.8
Approach LOS	A	A	A	A

Intersection Summary			
Delay		8.1	
Level of Service		A	
Intersection Capacity Utilization	25.7%		ICU Level of Service
Analysis Period (min)		15	A

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	27	90	0	12	72	23	2	0	17	22	1	19
Future Vol, veh/h	27	90	0	12	72	23	2	0	17	22	1	19
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	35	117	0	16	94	30	3	0	22	29	1	25
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.3	8	7.3	7.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	23%	11%	52%
Vol Thru, %	0%	77%	67%	2%
Vol Right, %	89%	0%	21%	45%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	19	117	107	42
LT Vol	2	27	12	22
Through Vol	0	90	72	1
RT Vol	17	0	23	19
Lane Flow Rate	25	152	139	55
Geometry Grp	1	1	1	1
Degree of Util (X)	0.029	0.18	0.159	0.068
Departure Headway (Hd)	4.159	4.258	4.114	4.473
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	865	831	857	805
Service Time	2.162	2.343	2.208	2.475
HCM Lane V/C Ratio	0.029	0.183	0.162	0.068
HCM Control Delay	7.3	8.3	8	7.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.7	0.6	0.2

Farmington Connectivity Study  
 1: Canton Rd (RT 179) & Spielman Hwy (RT 4)

Existing Conditions  
 PM Peak



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	210	324	448	378	265	305
Future Volume (vph)	210	324	448	378	265	305
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260	0	0			0
Storage Lanes	1	1	0			0
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	0.99	
Frt		0.850			0.928	
Flt Protected	0.950			0.974		
Satd. Flow (prot)	1787	1599	0	1832	1726	0
Flt Permitted	0.950			0.429		
Satd. Flow (perm)	1787	1599	0	807	1726	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		331			91	
Link Speed (mph)	35			50	50	
Link Distance (ft)	986			565	665	
Travel Time (s)	19.2			7.7	9.1	
Confl. Peds. (#/hr)			1			1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	214	331	457	386	270	311
Shared Lane Traffic (%)						
Lane Group Flow (vph)	214	331	0	843	581	0
Number of Detectors	1	1	1	1	1	
Detector Template			Left			
Leading Detector (ft)	40	40	20	40	40	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	40	40	20	40	40	
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	pm+ov	D.P+P	NA	NA	
Protected Phases	4	1	1	12	2	
Permitted Phases		4	2			
Detector Phase	4	1	1	2	2	
Switch Phase						
Minimum Initial (s)	6.0	6.0	6.0		20.0	
Minimum Split (s)	17.0	10.0	10.0		26.6	
Total Split (s)	29.0	10.0	10.0		46.6	
Total Split (%)	33.9%	11.7%	11.7%		54.4%	
Maximum Green (s)	25.0	6.0	6.0		40.0	
Yellow Time (s)	3.0	3.0	3.0		5.0	
All-Red Time (s)	1.0	1.0	1.0		1.6	
Lost Time Adjust (s)	0.0	0.0			0.0	

Farmington Connectivity Study  
 1: Canton Rd (RT 179) & Spielman Hwy (RT 4)

Existing Conditions  
 PM Peak

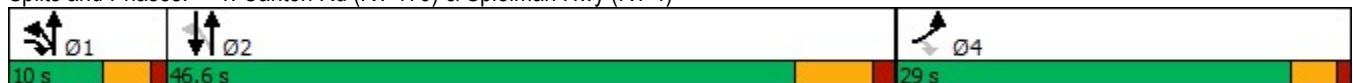


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Total Lost Time (s)	4.0	4.0			6.6	
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	1.0	3.0	3.0		5.0	
Recall Mode	None	Min	Min		Min	
Walk Time (s)	12.0					
Flash Dont Walk (s)	1.0					
Pedestrian Calls (#/hr)	1					
Act Effct Green (s)	12.1	22.1		48.7	40.1	
Actuated g/C Ratio	0.17	0.30		0.67	0.55	
v/c Ratio	0.72	0.46		1.35	0.59	
Control Delay	43.0	4.7		184.9	12.7	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	43.0	4.7		184.9	12.7	
LOS	D	A		F	B	
Approach Delay	19.7			184.9	12.7	
Approach LOS	B			F	B	
Queue Length 50th (ft)	92	0		~295	131	
Queue Length 95th (ft)	159	51		#790	268	
Internal Link Dist (ft)	906			485	585	
Turn Bay Length (ft)	260					
Base Capacity (vph)	614	715		624	991	
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	0.35	0.46		1.35	0.59	

Intersection Summary

Area Type: Other  
 Cycle Length: 85.6  
 Actuated Cycle Length: 72.8  
 Natural Cycle: 140  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.35  
 Intersection Signal Delay: 88.4  
 Intersection LOS: F  
 Intersection Capacity Utilization 101.2%  
 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.

Splits and Phases: 1: Canton Rd (RT 179) & Spielman Hwy (RT 4)

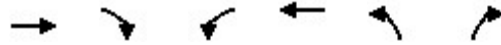




Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	393	91	96	493	113	80
Future Volume (vph)	393	91	96	493	113	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	60
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.975					0.850
Flt Protected				0.992	0.950	
Satd. Flow (prot)	1834	0	0	1866	1787	1599
Flt Permitted				0.992	0.950	
Satd. Flow (perm)	1834	0	0	1866	1787	1599
Link Speed (mph)	30			30	25	
Link Distance (ft)	740			816	860	
Travel Time (s)	16.8			18.5	23.5	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	401	93	98	503	115	82
Shared Lane Traffic (%)						
Lane Group Flow (vph)	494	0	0	601	115	82
Sign Control	Free			Free	Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	73.7%
Analysis Period (min)	15
	ICU Level of Service D



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	393	91	96	493	113	80
Future Volume (Veh/h)	393	91	96	493	113	80
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	401	93	98	503	115	82
<b>Pedestrians</b>						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type	None		None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			494	1146		448
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			494	1146		448
tC, single (s)			4.1	6.4		6.2
tC, 2 stage (s)						
tF (s)			2.2	3.5		3.3
p0 queue free %			91	43		87
cM capacity (veh/h)			1075	201		613
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>NB 1</b>			
Volume Total	494	601	197			
Volume Left	0	98	115			
Volume Right	93	0	82			
cSH	1700	1075	344			
Volume to Capacity	0.29	0.09	0.57			
Queue Length 95th (ft)	0	8	85			
Control Delay (s)	0.0	2.4	30.8			
Lane LOS			A		D	
Approach Delay (s)	0.0	2.4	30.8			
Approach LOS			D			
<b>Intersection Summary</b>						
Average Delay			5.8			
Intersection Capacity Utilization			73.7%	ICU Level of Service		D
Analysis Period (min)			15			

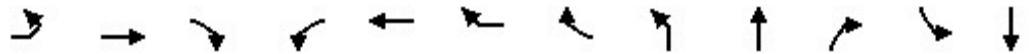
Intersection						
Int Delay, s/veh	5.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	393	91	96	493	113	80
Future Vol, veh/h	393	91	96	493	113	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	60
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	401	93	98	503	115	82

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	494	0	1147 448
Stage 1	-	-	-	-	448 -
Stage 2	-	-	-	-	699 -
Critical Hdwy	-	-	4.11	-	6.41 6.21
Critical Hdwy Stg 1	-	-	-	-	5.41 -
Critical Hdwy Stg 2	-	-	-	-	5.41 -
Follow-up Hdwy	-	-	2.209	-	3.509 3.309
Pot Cap-1 Maneuver	-	-	1075	-	221 613
Stage 1	-	-	-	-	646 -
Stage 2	-	-	-	-	495 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1075	-	193 613
Mov Cap-2 Maneuver	-	-	-	-	193 -
Stage 1	-	-	-	-	646 -
Stage 2	-	-	-	-	432 -

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	33.1
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	193	613	-	-	1075	-
HCM Lane V/C Ratio	0.597	0.133	-	-	0.091	-
HCM Control Delay (s)	48.1	11.8	-	-	8.7	0
HCM Lane LOS	E	B	-	-	A	A
HCM 95th %tile Q(veh)	3.3	0.5	-	-	0.3	-

3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



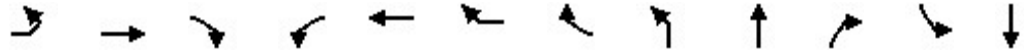
Lane Group	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↑↑			↑	↑		↑	↑	↑	↑	↑
Traffic Volume (vph)	2	36	12	288	23	391	80	176	300	266	76	318
Future Volume (vph)	2	36	12	288	23	391	80	176	300	266	76	318
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)			50	0		0		0		145	110	
Storage Lanes			1	0		1		1		1	1	
Taper Length (ft)				25				25			50	
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95
Ped Bike Factor		1.00			1.00					0.99	1.00	
Frt		0.964				0.850				0.850		0.999
Flt Protected		0.998			0.956			0.950			0.950	
Satd. Flow (prot)	0	3394	0	0	1781	1583	0	1770	1863	1583	1770	1768
Flt Permitted		0.946			0.703			0.247			0.575	
Satd. Flow (perm)	0	3217	0	0	1308	1583	0	460	1863	1563	1068	1768
Right Turn on Red			No				No			Yes		
Satd. Flow (RTOR)										185		
Link Speed (mph)		25			30			25				35
Link Distance (ft)		761			292			461				785
Travel Time (s)		20.8			6.6			12.6				15.3
Confl. Peds. (#/hr)			1	1						2	2	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	2	36	12	291	23	395	81	178	303	269	77	321
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	50	0	0	314	476	0	178	303	269	77	324
Number of Detectors	1	1		1	1	1		1	0	0	1	1
Detector Template	Left			Left								
Leading Detector (ft)	20	44		20	44	44		44	0	0	44	206
Trailing Detector (ft)	0	-6		0	-6	-6		-6	0	0	-6	200
Detector 1 Position(ft)	0	-6		0	-6	-6		-6	0	0	-6	200
Detector 1 Size(ft)	20	50		20	50	50		50	6	20	50	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA		Perm	NA	pt+ov		D.P+P	NA	Free	Perm	NA
Protected Phases		4			4	4.5		1	1.2			2
Permitted Phases	4			4				2		Free	2	
Detector Phase	4	4		4	4	4		1	2		2	2
Switch Phase												
Minimum Initial (s)	9.0	9.0		9.0	9.0			5.0			15.0	15.0
Minimum Split (s)	14.0	14.0		14.0	14.0			9.0			21.0	21.0
Total Split (s)	34.0	34.0		34.0	34.0			17.0			22.0	22.0
Total Split (%)	27.4%	27.4%		27.4%	27.4%			13.7%			17.7%	17.7%
Maximum Green (s)	29.0	29.0		29.0	29.0			13.0			16.0	16.0
Yellow Time (s)	4.0	4.0		4.0	4.0			3.0			4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0			1.0			2.0	2.0
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)		5.0			5.0			4.0			6.0	6.0

3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



Lane Group	SBR	SBR2	SEL2	SEL	SER	SER2	Ø3
Lane Configurations							
Traffic Volume (vph)	2	9	8	315	147	2	
Future Volume (vph)	2	9	8	315	147	2	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	60			0	255		
Storage Lanes	1			1	1		
Taper Length (ft)				25			
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	
Ped Bike Factor				1.00			
Frt		0.850			0.850		
Flt Protected				0.950			
Satd. Flow (prot)	0	1504	0	1770	1583	0	
Flt Permitted				0.985			
Satd. Flow (perm)	0	1504	0	1832	1583	0	
Right Turn on Red		Yes				No	
Satd. Flow (RTOR)		185					
Link Speed (mph)				30			
Link Distance (ft)				820			
Travel Time (s)				18.6			
Confl. Peds. (#/hr)				2	1		
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	
Adj. Flow (vph)	2	9	8	318	148	2	
Shared Lane Traffic (%)		10%					
Lane Group Flow (vph)	0	8	0	326	150	0	
Number of Detectors		0	1	1	1		
Detector Template			Left				
Leading Detector (ft)		0	20	44	44		
Trailing Detector (ft)		0	0	-6	-6		
Detector 1 Position(ft)		0	0	-6	-6		
Detector 1 Size(ft)		20	20	50	50		
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		
Turn Type		Free	D,Pm	Prot	Prot		
Protected Phases				5	5	3	
Permitted Phases		Free	5				
Detector Phase			5	5	5		
Switch Phase							
Minimum Initial (s)			9.0	9.0	9.0	1.0	
Minimum Split (s)			14.0	14.0	14.0	23.0	
Total Split (s)			28.0	28.0	28.0	23.0	
Total Split (%)			22.6%	22.6%	22.6%	19%	
Maximum Green (s)			23.0	23.0	23.0	19.0	
Yellow Time (s)			4.0	4.0	4.0	4.0	
All-Red Time (s)			1.0	1.0	1.0	0.0	
Lost Time Adjust (s)				0.0	0.0		
Total Lost Time (s)				5.0	5.0		

3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)

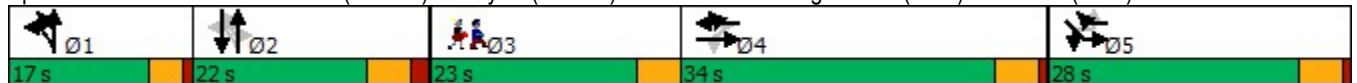


Lane Group	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lead/Lag	Lag	Lag		Lag	Lag			Lead			Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes			Yes			Yes	Yes
Vehicle Extension (s)	1.5	1.5		1.5	1.5			1.5			2.5	2.5
Recall Mode	None	None		None	None			None			Min	Min
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		29.3			29.3	56.7		29.3	33.4	103.0	16.2	16.2
Actuated g/C Ratio		0.28			0.28	0.55		0.28	0.32	1.00	0.16	0.16
v/c Ratio		0.05			0.84	0.55		0.65	0.50	0.17	0.46	1.17
Control Delay		30.5			57.9	19.8		40.7	33.1	0.2	52.8	147.4
Queue Delay		0.0			0.0	0.0		0.0	0.5	0.0	0.0	0.0
Total Delay		30.5			57.9	19.8		40.7	33.5	0.2	52.8	147.4
LOS		C			E	B		D	C	A	D	F
Approach Delay		30.5			34.9			23.3				126.7
Approach LOS		C			C			C				F
Queue Length 50th (ft)		12			186	174		82	151	0	45	~255
Queue Length 95th (ft)		34			#452	412		#193	304	0	#116	#565
Internal Link Dist (ft)		681			212			381				705
Turn Bay Length (ft)										145	110	
Base Capacity (vph)		915			372	871		305	603	1563	167	277
Starvation Cap Reductn		0			0	0		0	74	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		0.05			0.84	0.55		0.58	0.57	0.17	0.46	1.17

Intersection Summary

Area Type: Other  
 Cycle Length: 124  
 Actuated Cycle Length: 103  
 Natural Cycle: 125  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.17  
 Intersection Signal Delay: 49.9  
 Intersection LOS: D  
 Intersection Capacity Utilization 86.7%  
 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.

Splits and Phases: 3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



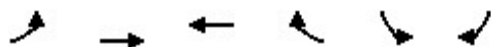
3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



Lane Group	SBR	SBR2	SEL2	SEL	SER	SER2	Ø3
Lead/Lag							Lead
Lead-Lag Optimize?							Yes
Vehicle Extension (s)			1.5	1.5	1.5		3.0
Recall Mode			None	None	None		None
Walk Time (s)							7.0
Flash Dont Walk (s)							12.0
Pedestrian Calls (#/hr)							3
Act Effct Green (s)	103.0		22.3	22.3			
Actuated g/C Ratio	1.00		0.22	0.22			
v/c Ratio	0.01		0.82	0.44			
Control Delay	0.0		57.5	41.6			
Queue Delay	0.0		0.0	0.0			
Total Delay	0.0		57.5	41.6			
LOS		A		E		D	
Approach Delay				52.5			
Approach LOS				D			
Queue Length 50th (ft)		0		195		82	
Queue Length 95th (ft)		0		#445		180	
Internal Link Dist (ft)				740			
Turn Bay Length (ft)		60				255	
Base Capacity (vph)		1504		413		357	
Starvation Cap Reductn		0		0		0	
Spillback Cap Reductn		0		0		0	
Storage Cap Reductn		0		0		0	
Reduced v/c Ratio		0.01		0.79		0.42	
<b>Intersection Summary</b>							

Farmington Connectivity Study  
 4: Farmington Ave (RT 4) & W Avon Rd (RT 167)

Existing Conditions  
 PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3
Lane Configurations							
Traffic Volume (vph)	185	540	572	65	59	238	
Future Volume (vph)	185	540	572	65	59	238	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	365			0	0	0	
Storage Lanes	1			0	1	0	
Taper Length (ft)	50				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt			0.986		0.892		
Flt Protected	0.950				0.990		
Satd. Flow (prot)	1787	1881	1855	0	1661	0	
Flt Permitted	0.237				0.990		
Satd. Flow (perm)	446	1881	1855	0	1661	0	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			5		131		
Link Speed (mph)		30	35		30		
Link Distance (ft)		1079	965		1192		
Travel Time (s)		24.5	18.8		27.1		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	
Adj. Flow (vph)	189	551	584	66	60	243	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	189	551	650	0	303	0	
Number of Detectors	1	2	2		1		
Detector Template							
Leading Detector (ft)	24	246	246		24		
Trailing Detector (ft)	-6	120	120		-6		
Detector 1 Position(ft)	-6	120	120		-6		
Detector 1 Size(ft)	30	6	6		30		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		
Detector 2 Position(ft)		240	240				
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.P+P	NA	NA		Prot		
Protected Phases	1	1 2	2		4	3	
Permitted Phases	2						
Detector Phase	1	2	2		4		
Switch Phase							
Minimum Initial (s)	5.0		15.0		7.0	1.0	
Minimum Split (s)	9.5		22.5		22.5	23.0	
Total Split (s)	19.0		65.5		27.0	23.0	
Total Split (%)	14.1%		48.7%		20.1%	17%	
Maximum Green (s)	15.0		60.0		23.0	19.0	

Farmington Connectivity Study  
 4: Farmington Ave (RT 4) & W Avon Rd (RT 167)

Existing Conditions  
 PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3
Yellow Time (s)	3.0		4.0		3.0		4.0
All-Red Time (s)	1.0		1.5		1.0		0.0
Lost Time Adjust (s)	0.0		0.0		0.0		
Total Lost Time (s)	4.0		5.5		4.0		
Lead/Lag	Lead		Lag		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	1.5		2.5		2.0		3.0
Recall Mode	None		Min		None		None
Walk Time (s)							7.0
Flash Dont Walk (s)							11.0
Pedestrian Calls (#/hr)							0
Act Effct Green (s)	43.9	48.2	34.5		15.0		
Actuated g/C Ratio	0.61	0.67	0.48		0.21		
v/c Ratio	0.46	0.44	0.73		0.67		
Control Delay	8.6	7.0	20.4		25.3		
Queue Delay	0.0	0.0	0.0		0.0		
Total Delay	8.6	7.0	20.4		25.3		
LOS	A	A	C		C		
Approach Delay		7.4	20.4		25.3		
Approach LOS		A	C		C		
Queue Length 50th (ft)	25	92	207		65		
Queue Length 95th (ft)	60	195	399		198		
Internal Link Dist (ft)		999	885		1112		
Turn Bay Length (ft)	365						
Base Capacity (vph)	605	1728	1535		667		
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	0.31	0.32	0.42		0.45		

Intersection Summary

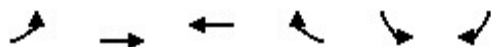
Area Type:	Other
Cycle Length:	134.5
Actuated Cycle Length:	72
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.73
Intersection Signal Delay:	15.6
Intersection LOS:	B
Intersection Capacity Utilization:	73.5%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 4: Farmington Ave (RT 4) & W Avon Rd (RT 167)



Farmington Connectivity Study  
5: Farmington Ave (RT 4) & Monteith Dr

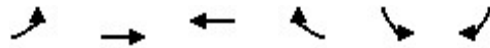
Existing Conditions  
PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø2	Ø3
Lane Configurations								
Traffic Volume (vph)	81	569	567	62	85	96		
Future Volume (vph)	81	569	567	62	85	96		
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			0.987			0.850		
Flt Protected		0.994			0.950			
Satd. Flow (prot)	0	1889	1875	0	1805	1615		
Flt Permitted		0.839			0.950			
Satd. Flow (perm)	0	1594	1875	0	1805	1615		
Right Turn on Red				Yes		Yes		
Satd. Flow (RTOR)			9			109		
Link Speed (mph)		35	35		25			
Link Distance (ft)		784	925		548			
Travel Time (s)		15.3	18.0		14.9			
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88		
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%		
Adj. Flow (vph)	92	647	644	70	97	109		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	739	714	0	97	109		
Number of Detectors	1	0	1		3	3		
Detector Template	Left							
Leading Detector (ft)	20	0	356		24	24		
Trailing Detector (ft)	0	0	350		-6	-6		
Detector 1 Position(ft)	0	0	350		-6	-6		
Detector 1 Size(ft)	20	6	6		6	6		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)					6	6		
Detector 2 Size(ft)					6	6		
Detector 2 Type					Cl+Ex	Cl+Ex		
Detector 2 Channel								
Detector 2 Extend (s)					0.0	0.0		
Detector 3 Position(ft)					18	18		
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	D.P+P	NA	NA		Prot	Perm		
Protected Phases	1	1 2 3	2 3		4		2	3
Permitted Phases	2 3					4		
Detector Phase	1	2	2		4	4		
Switch Phase								
Minimum Initial (s)	5.0				7.0	7.0	15.0	1.0
Minimum Split (s)	9.0				16.0	16.0	20.4	7.5
Total Split (s)	10.0				30.0	30.0	71.0	9.0

Farmington Connectivity Study  
5: Farmington Ave (RT 4) & Monteith Dr

Existing Conditions  
PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø2	Ø3
Total Split (%)	8.3%				25.0%	25.0%	59%	8%
Maximum Green (s)	6.0				26.0	26.0	65.6	2.5
Yellow Time (s)	3.0				3.0	3.0	4.4	4.4
All-Red Time (s)	1.0				1.0	1.0	1.0	2.1
Lost Time Adjust (s)					0.0	0.0		
Total Lost Time (s)					4.0	4.0		
Lead/Lag	Lead				Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes				Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0				1.5	1.5	3.0	3.0
Recall Mode	None				None	None	C-Max	None
Walk Time (s)					11.0	11.0		
Flash Dont Walk (s)					1.0	1.0		
Pedestrian Calls (#/hr)					0	0		
Act Effct Green (s)		101.3	99.9		10.7	10.7		
Actuated g/C Ratio		0.84	0.83		0.09	0.09		
v/c Ratio		0.55	0.46		0.60	0.45		
Control Delay		4.8	4.0		67.7	15.1		
Queue Delay		0.0	0.0		0.0	0.0		
Total Delay		4.8	4.0		67.7	15.1		
LOS		A	A		E	B		
Approach Delay		4.8	4.0		39.9			
Approach LOS		A	A		D			
Queue Length 50th (ft)		120	110		74	0		
Queue Length 95th (ft)		226	193		124	50		
Internal Link Dist (ft)		704	845		468			
Turn Bay Length (ft)								
Base Capacity (vph)		1345	1562		391	435		
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		0.55	0.46		0.25	0.25		

Intersection Summary






















Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 10 (8%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.60  
 Intersection Signal Delay: 8.8  
 Intersection Capacity Utilization 85.0%  
 Analysis Period (min) 15  
 Intersection LOS: A  
 ICU Level of Service E

Splits and Phases: 5: Farmington Ave (RT 4) & Monteith Dr



Farmington Connectivity Study  
 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)

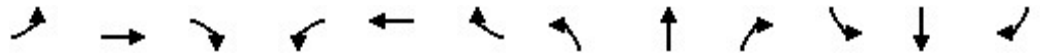
Existing Conditions  
 PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	596	17	26	538	241	26	16	33	301	12	59
Future Volume (vph)	52	596	17	26	538	241	26	16	33	301	12	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90		0	90		90	0		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	65			110			25			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00				0.98		1.00		
Frt		0.996				0.850		0.899				0.876
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1854	0	1770	1863	1583	1770	1645	0	1770	1632	0
Flt Permitted	0.262			0.225			0.708			0.723		
Satd. Flow (perm)	488	1854	0	419	1863	1583	1319	1645	0	1344	1632	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				175		35				62
Link Speed (mph)		40			40			30				35
Link Distance (ft)		635			779			428				768
Travel Time (s)		10.8			13.3			9.7				15.0
Confl. Peds. (#/hr)			1	1					1	1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	55	627	18	27	566	254	27	17	35	317	13	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	55	645	0	27	566	254	27	52	0	317	75	0
Number of Detectors	1	2		1	2	0	1	1		1	1	
Detector Template												
Leading Detector (ft)	45	342		45	342	0	55	50		50	60	
Trailing Detector (ft)	-5	190		-5	190	0	-5	-10		-10	-10	
Detector 1 Position(ft)	-5	190		-5	190	0	-5	-10		-10	-10	
Detector 1 Size(ft)	50	6		50	6	20	60	60		60	70	
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)		336			336							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	8		7	8	
Permitted Phases	6			2		2	8			8		
Detector Phase	1	6		5	2	2	7	8		7	8	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	5.0	7.0		5.0	7.0	
Minimum Split (s)	10.4	22.0		10.4	22.0	22.0	11.0	14.0		11.0	14.0	
Total Split (s)	15.0	46.0		15.0	46.0	46.0	29.0	16.0		29.0	16.0	
Total Split (%)	12.5%	38.3%		12.5%	38.3%	38.3%	24.2%	13.3%		24.2%	13.3%	

Lane Group	Ø9
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	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
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	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	14.0
Total Split (s)	14.0
Total Split (%)	12%

Farmington Connectivity Study  
 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)

Existing Conditions  
 PM Peak

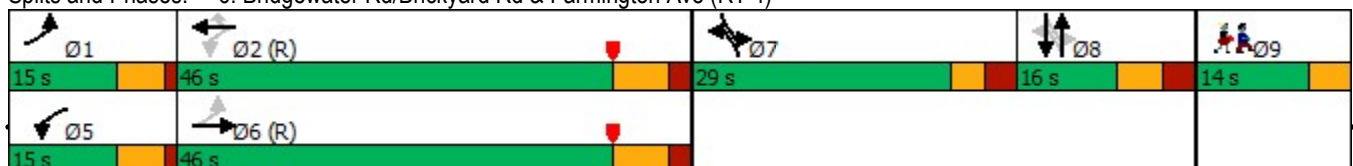


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	9.6	39.0		9.6	39.0	39.0	23.1	9.0		23.1	9.0	
Yellow Time (s)	4.4	5.0		4.4	5.0	5.0	3.0	4.1		3.0	4.1	
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	2.9	2.9		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	7.0		5.4	7.0	7.0	5.9	7.0		5.9	7.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effect Green (s)	70.3	64.4		67.7	61.6	61.6	28.3	7.5		28.3	7.5	
Actuated g/C Ratio	0.59	0.54		0.56	0.51	0.51	0.24	0.06		0.24	0.06	
v/c Ratio	0.16	0.65		0.09	0.59	0.28	0.07	0.39		0.81	0.47	
Control Delay	14.1	27.9		14.2	27.9	8.6	29.4	33.6		54.1	27.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	14.1	27.9		14.2	27.9	8.6	29.4	33.6		54.1	27.6	
LOS	B	C		B	C	A	C	C		D	C	
Approach Delay		26.8			21.7			32.1			49.0	
Approach LOS		C			C			C			D	
Queue Length 50th (ft)	17	373		8	312	32	15	13		207	10	
Queue Length 95th (ft)	48	#752		28	#632	112	36	53		295	58	
Internal Link Dist (ft)		555			699			348			688	
Turn Bay Length (ft)	90			90		90				150		
Base Capacity (vph)	394	995		355	955	897	417	155		418	179	
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	0.14	0.65		0.08	0.59	0.28	0.06	0.34		0.76	0.42	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.81  
 Intersection Signal Delay: 29.2 Intersection LOS: C  
 Intersection Capacity Utilization 76.1% 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.

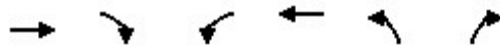
Splits and Phases: 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)



Lane Group	Ø9
Maximum Green (s)	10.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
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)	16.0
Pedestrian Calls (#/hr)	2
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	

Farmington Connectivity Study  
7: Garden St & Farmington Ave (RT 4)

Existing Conditions  
PM Peak



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø4
Lane Configurations	↑↑		↙	↑	↘			
Traffic Volume (vph)	1094	106	12	763	107	14		
Future Volume (vph)	1094	106	12	763	107	14		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)		0	200		0	0		
Storage Lanes		0	1		1	0		
Taper Length (ft)			50		25			
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00		
Ped Bike Factor	1.00		1.00		0.98			
Frt	0.987				0.984			
Flt Protected			0.950		0.958			
Satd. Flow (prot)	3520	0	1787	1881	1773	0		
Flt Permitted			0.184		0.958			
Satd. Flow (perm)	3520	0	346	1881	1745	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)	11				4			
Link Speed (mph)	30			30	25			
Link Distance (ft)	1042			566	488			
Travel Time (s)	23.7			12.9	13.3			
Confl. Peds. (#/hr)		6	6		5			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%		
Adj. Flow (vph)	1164	113	13	812	114	15		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	1277	0	13	812	129	0		
Number of Detectors	0		0	0	3			
Detector Template								
Leading Detector (ft)	0		0	0	24			
Trailing Detector (ft)	0		0	0	-6			
Detector 1 Position(ft)	0		0	0	-6			
Detector 1 Size(ft)	6		20	6	6			
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel								
Detector 1 Extend (s)	0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0		0.0	0.0	0.0			
Detector 2 Position(ft)					6			
Detector 2 Size(ft)					6			
Detector 2 Type					Cl+Ex			
Detector 2 Channel								
Detector 2 Extend (s)					0.0			
Detector 3 Position(ft)					18			
Detector 3 Size(ft)					6			
Detector 3 Type					Cl+Ex			
Detector 3 Channel								
Detector 3 Extend (s)					0.0			
Turn Type	NA		Perm	NA	Prot			
Protected Phases	2 4			2	5		3	4
Permitted Phases			2					

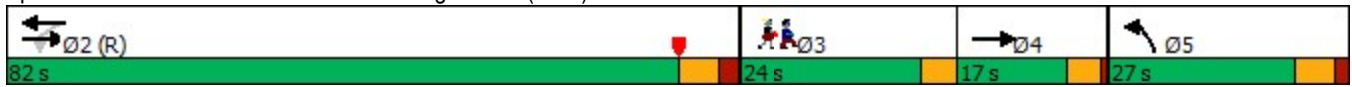


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø4
Detector Phase	2		2	2	5			
Switch Phase								
Minimum Initial (s)			15.0	15.0	7.0		7.0	6.0
Minimum Split (s)			22.1	22.1	13.3		24.0	10.8
Total Split (s)			82.0	82.0	27.0		24.0	17.0
Total Split (%)			54.7%	54.7%	18.0%		16%	11%
Maximum Green (s)			74.9	74.9	20.7		20.0	12.2
Yellow Time (s)			4.6	4.6	4.5		4.0	3.8
All-Red Time (s)			2.5	2.5	1.8		0.0	1.0
Lost Time Adjust (s)			0.0	0.0	0.0			
Total Lost Time (s)			7.1	7.1	6.3			
Lead/Lag							Lead	Lag
Lead-Lag Optimize?							Yes	Yes
Vehicle Extension (s)			3.0	3.0	1.5		3.0	1.5
Recall Mode			C-Max	C-Max	None		None	None
Walk Time (s)							7.0	
Flash Dont Walk (s)							13.0	
Pedestrian Calls (#/hr)							11	
Act Effct Green (s)	112.4		112.4	112.4	14.6			
Actuated g/C Ratio	0.75		0.75	0.75	0.10			
v/c Ratio	0.48		0.05	0.58	0.74			
Control Delay	10.4		1.8	4.6	86.9			
Queue Delay	0.0		0.0	0.3	0.0			
Total Delay	10.4		1.8	4.9	86.9			
LOS	B		A	A	F			
Approach Delay	10.4			4.9	86.9			
Approach LOS	B			A	F			
Queue Length 50th (ft)	159		0	21	121			
Queue Length 95th (ft)	442		m1	123	188			
Internal Link Dist (ft)	962			486	408			
Turn Bay Length (ft)			200					
Base Capacity (vph)	2641		259	1409	248			
Starvation Cap Reductn	0		0	180	0			
Spillback Cap Reductn	143		0	0	0			
Storage Cap Reductn	0		0	0	0			
Reduced v/c Ratio	0.51		0.05	0.66	0.52			

**Intersection Summary**

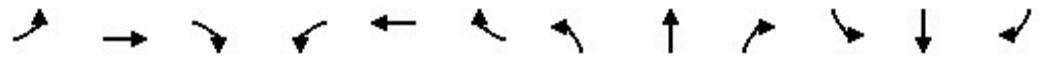
Area Type: Other  
 Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 30 (20%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 12.8  
 Intersection Capacity Utilization 58.1%  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Garden St & Farmington Ave (RT 4)



Farmington Connectivity Study  
 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4)

Existing Conditions  
 PM Peak

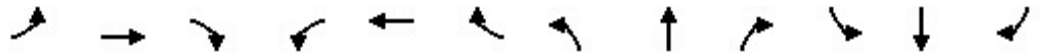


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	902	211	75	622	78	163	116	70	197	158	8
Future Volume (vph)	1	902	211	75	622	78	163	116	70	197	158	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	255		0	100		50	0		0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (ft)	65			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor							0.99					1.00
Frt			0.850		0.983				0.850			0.997
Flt Protected	0.950			0.950			0.950					0.974
Satd. Flow (prot)	1787	3574	1599	1787	1849	0	1787	1881	1599	0	1826	0
Flt Permitted	0.084			0.138			0.950					0.974
Satd. Flow (perm)	158	3574	1599	260	1849	0	1774	1881	1599	0	1826	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30				30
Link Distance (ft)		566			848			677				693
Travel Time (s)		12.9			19.3			15.4				15.8
Confl. Peds. (#/hr)							2					2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	1	920	215	77	635	80	166	118	71	201	161	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	920	215	77	715	0	166	118	71	0	370	0
Number of Detectors	3	3	4	1	1		3	3	2	1	2	
Detector Template										Left		
Leading Detector (ft)	30	30	36	34	34		30	30	48	20	48	
Trailing Detector (ft)	0	0	-6	0	0		0	0	0	0	-6	
Detector 1 Position(ft)	0	0	-6	0	0		0	0	0	0	-6	
Detector 1 Size(ft)	6	6	6	34	34		6	6	12	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	12	12	6				12	12	18		6	
Detector 2 Size(ft)	6	6	6				6	6	30		42	
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0	0.0				0.0	0.0	0.0		0.0	
Detector 3 Position(ft)	24	24	18				24	24				
Detector 3 Size(ft)	6	6	6				6	6				
Detector 3 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex				
Detector 3 Channel												
Detector 3 Extend (s)	0.0	0.0	0.0				0.0	0.0				
Detector 4 Position(ft)			30									
Detector 4 Size(ft)			6									
Detector 4 Type			Cl+Ex									

Lane Group	Ø3
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)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Detector 4 Position(ft)	
Detector 4 Size(ft)	
Detector 4 Type	

Farmington Connectivity Study  
 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4)

Existing Conditions  
 PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 4 Channel												
Detector 4 Extend (s)	0.0											
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Split	NA	pt+ov	Split	NA	
Protected Phases	1	6		5	2		7	7	5 7	4	4	
Permitted Phases	6		6	2								
Detector Phase	1	6	6	5	2		7	7	7	4	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	7.0	20.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	9.5	27.3	27.3	12.0	27.3		13.0	13.0		22.5	22.5	
Total Split (s)	15.0	54.0	54.0	15.0	54.0		23.0	23.0		34.0	34.0	
Total Split (%)	10.0%	36.0%	36.0%	10.0%	36.0%		15.3%	15.3%		22.7%	22.7%	
Maximum Green (s)	11.0	46.7	46.7	10.0	46.7		17.0	17.0		28.3	28.3	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	2.8	2.8	2.0	2.8		3.0	3.0		2.7	2.7	
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	7.3	7.3	5.0	7.3		6.0	6.0				5.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag					Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None		None	None	
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										5.0	5.0	
Pedestrian Calls (#/hr)										2	2	
Act Effct Green (s)	65.7	57.4	57.4	72.7	68.6		17.5	17.5	31.5			38.3
Actuated g/C Ratio	0.44	0.38	0.38	0.48	0.46		0.12	0.12	0.21			0.26
v/c Ratio	0.01	0.67	0.35	0.37	0.85		0.80	0.54	0.21			0.79
Control Delay	12.0	32.9	26.1	30.9	50.5		90.2	71.6	49.8			65.5
Queue Delay	0.0	0.5	0.0	0.0	0.0		0.0	0.0	0.0			0.0
Total Delay	12.0	33.4	26.1	30.9	50.5		90.2	71.6	49.8			65.5
LOS	B	C	C	C	D		F	E	D			E
Approach Delay		32.0			48.6			75.9				65.5
Approach LOS		C			D			E				E
Queue Length 50th (ft)	1	385	147	43	635		158	109	57			336
Queue Length 95th (ft)	m1	528	233	68	#1027		#288	181	105			#610
Internal Link Dist (ft)		486			768			597				613
Turn Bay Length (ft)	100		150	255			100		50			
Base Capacity (vph)	195	1368	612	227	845		219	231	324			466
Starvation Cap Reductn	0	144	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	0.75	0.35	0.34	0.85		0.76	0.51	0.22			0.79

Intersection Summary

Area Type: Other  
 Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 20 (13%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated

Lane Group	Ø3
Detector 4 Channel	
Detector 4 Extend (s)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	24.0
Total Split (s)	24.0
Total Split (%)	16%
Maximum Green (s)	20.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	13.0
Pedestrian Calls (#/hr)	2
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	

# Farmington Connectivity Study

## 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4)

Existing Conditions  
PM Peak

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 47.5

Intersection LOS: D

Intersection Capacity Utilization 82.2%








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.

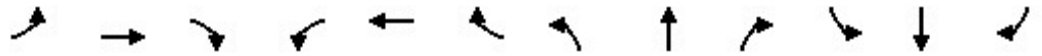
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4)

 Ø1	 Ø2 (R)	 Ø3	 Ø4	 Ø7
15 s	54 s	24 s	34 s	23 s
 Ø5	 Ø6 (R)			
15 s	54 s			

Farmington Connectivity Study  
 9: High St/Backage Rd & Farmington Ave (RT 4)

Existing Conditions  
 PM Peak

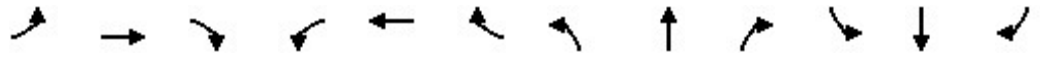


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	1174	37	50	746	4	62	1	78	5	2	2
Future Volume (vph)	4	1174	37	50	746	4	62	1	78	5	2	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	85		100	115		0	0		85	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	70			115			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			0.99	
Frt		0.995			0.999				0.850		0.970	
Flt Protected	0.950			0.950				0.953			0.973	
Satd. Flow (prot)	1770	3522	0	1770	1861	0	0	1775	1583	0	1748	0
Flt Permitted	0.299			0.176								
Satd. Flow (perm)	557	3522	0	328	1861	0	0	1856	1583	0	1792	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		3							85			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		848			473			291			375	
Travel Time (s)		19.3			10.8			6.6			8.5	
Confl. Peds. (#/hr)							1		1	1		1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	4	1223	39	52	777	4	65	1	81	5	2	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	1262	0	52	781	0	0	66	81	0	9	0
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template							Left			Left		
Leading Detector (ft)	40	40		25	25		20	35	35	20	30	
Trailing Detector (ft)	0	0		-10	-10		0	0	0	0	0	
Detector 1 Position(ft)	0	0		-10	-10		0	0	0	0	0	
Detector 1 Size(ft)	40	40		35	35		20	35	35	20	30	
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	pm+pt	NA		pm+pt	NA		D.P+P	NA	Prot	Perm	NA	
Protected Phases	1	6		5	2		4	4 7	4 7		7	
Permitted Phases	6			2			7			7		
Detector Phase	1	6		5	2		4	4	4	7	7	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		7.0			7.0	7.0	
Minimum Split (s)	9.0	21.7		9.0	21.7		11.7			12.0	12.0	
Total Split (s)	13.0	83.0		13.0	83.0		14.0			16.0	16.0	
Total Split (%)	8.7%	55.3%		8.7%	55.3%		9.3%			10.7%	10.7%	
Maximum Green (s)	9.0	76.3		9.0	76.3		9.3			11.0	11.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0			3.0	3.0	
All-Red Time (s)	1.0	2.2		1.0	2.2		1.7			2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	
Total Lost Time (s)	4.0	6.7		4.0	6.7						5.0	

Lane Group	Ø3
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	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	24.0
Total Split (s)	24.0
Total Split (%)	16%
Maximum Green (s)	20.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	

Farmington Connectivity Study  
 9: High St/Backage Rd & Farmington Ave (RT 4)

Existing Conditions  
 PM Peak

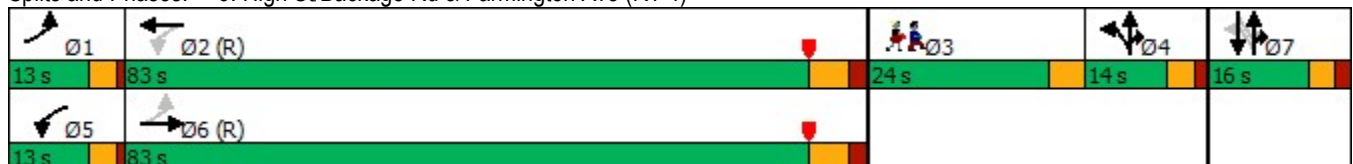


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag		Lead	Lag		Lag					
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes					
Vehicle Extension (s)	1.5	2.0		1.5	2.0		2.0			2.0	2.0	
Recall Mode	None	C-Min		None	C-Min		None			None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	121.1	114.4		124.5	120.3		11.7	11.7			7.0	
Actuated g/C Ratio	0.81	0.76		0.83	0.80		0.08	0.08			0.05	
v/c Ratio	0.01	0.47		0.16	0.52		0.46	0.40			0.11	
Control Delay	3.8	12.9		5.7	10.5		74.5	16.4			71.4	
Queue Delay	0.0	0.2		0.0	0.0		0.0	0.0			0.0	
Total Delay	3.8	13.1		5.7	10.5		74.5	16.4			71.4	
LOS	A	B		A	B		E	B			E	
Approach Delay	13.1			10.2			42.5				71.4	
Approach LOS	B			B			D				E	
Queue Length 50th (ft)	1	362		5	144		64	0			9	
Queue Length 95th (ft)	m1	181		35	733		107	48			29	
Internal Link Dist (ft)	768			393			211				295	
Turn Bay Length (ft)	85			115			85					
Base Capacity (vph)	534	2687		359	1492		153	208			131	
Starvation Cap Reductn	0	642		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	0.01	0.62		0.14	0.52		0.43	0.39			0.07	

Intersection Summary

Area Type: Other  
 Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 45 (30%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.52  
 Intersection Signal Delay: 14.2 Intersection LOS: B  
 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.

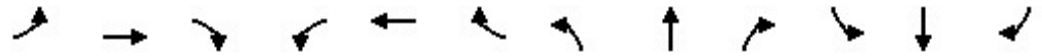
Splits and Phases: 9: High St/Backage Rd & Farmington Ave (RT 4)



Lane Group	Ø3
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	13.0
Pedestrian Calls (#/hr)	4
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

Farmington Connectivity Study  
 10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd

Existing Conditions  
 PM Peak

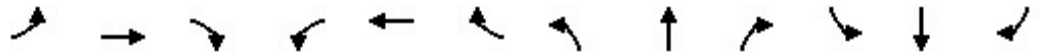


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	8	6	6	44	1	71	2	399	39	42	498	29
Future Volume (vph)	8	6	6	44	1	71	2	399	39	42	498	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00							
Frt		0.959			0.917			0.988			0.993	
Flt Protected		0.981			0.981						0.996	
Satd. Flow (prot)	0	1758	0	0	1692	0	0	1859	0	0	1861	0
Flt Permitted		0.872			0.865			0.997			0.957	
Satd. Flow (perm)	0	1562	0	0	1491	0	0	1853	0	0	1788	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			63			5			3	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		360			802			2590			707	
Travel Time (s)		8.2			18.2			44.1			12.1	
Confl. Peds. (#/hr)			1	1								
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	9	7	7	49	1	79	2	443	43	47	553	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	23	0	0	129	0	0	488	0	0	632	0
Number of Detectors	1	1		1	1		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	22		20	22		20	206		20	206	
Trailing Detector (ft)	0	-10		0	-10		0	100		0	100	
Detector 1 Position(ft)	0	-10		0	-10		0	100		0	100	
Detector 1 Size(ft)	20	32		20	32		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)								200			200	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		D.P+P	NA	
Protected Phases		4			4			2		1	12	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		1	1	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0		5.0		
Minimum Split (s)	12.0	12.0		12.0	12.0		21.6	21.6		9.0		
Total Split (s)	30.0	30.0		30.0	30.0		51.6	51.6		12.0		
Total Split (%)	26.0%	26.0%		26.0%	26.0%		44.6%	44.6%		10.4%		
Maximum Green (s)	25.0	25.0		25.0	25.0		45.0	45.0		8.0		
Yellow Time (s)	3.3	3.3		3.3	3.3		4.2	4.2		3.0		

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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)	
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	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	22.0
Total Split (s)	22.0
Total Split (%)	19%
Maximum Green (s)	18.0
Yellow Time (s)	4.0

Farmington Connectivity Study  
 10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd

Existing Conditions  
 PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	1.7	1.7		1.7	1.7		2.4	2.4		1.0		
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.0			5.0			6.6				
Lead/Lag	Lag	Lag		Lag	Lag		Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes		
Vehicle Extension (s)	1.5	1.5		1.5	1.5		2.5	2.5		3.0		
Recall Mode	None	None		None	None		Min	Min		None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		9.1			9.1			20.4				32.4
Actuated g/C Ratio		0.17			0.17			0.37				0.59
v/c Ratio		0.09			0.43			0.70				0.59
Control Delay		23.1			20.6			23.0				11.6
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		23.1			20.6			23.0				11.6
LOS		C			C			C				B
Approach Delay		23.1			20.6			23.0				11.6
Approach LOS		C			C			C				B
Queue Length 50th (ft)		4			16			112				66
Queue Length 95th (ft)		32			95			362				379
Internal Link Dist (ft)		280			722			2510				627
Turn Bay Length (ft)												
Base Capacity (vph)		809			800			1597				1071
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		0.03			0.16			0.31				0.59

Intersection Summary

Area Type:	Other
Cycle Length:	115.6
Actuated Cycle Length:	54.7
Natural Cycle:	70
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.70
Intersection Signal Delay:	17.1
Intersection LOS:	B
Intersection Capacity Utilization:	75.1%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd



Lane Group	Ø3
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	1
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	180	38	46	237	330	287
Future Volume (vph)	180	38	46	237	330	287
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	0.977			0.937		
Flt Protected	0.960			0.992		
Satd. Flow (prot)	1782	0	0	1885	1780	0
Flt Permitted	0.960			0.992		
Satd. Flow (perm)	1782	0	0	1885	1780	0
Link Speed (mph)	40			30	40	
Link Distance (ft)	781			809	2590	
Travel Time (s)	13.3			18.4	44.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	196	41	50	258	359	312
Shared Lane Traffic (%)						
Lane Group Flow (vph)	237	0	0	308	671	0
Sign Control	Stop			Stop	Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	70.7%
ICU Level of Service	C
Analysis Period (min)	15



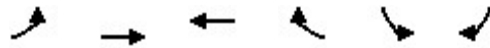
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	180	38	46	237	330	287
Future Volume (vph)	180	38	46	237	330	287
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	196	41	50	258	359	312
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total (vph)	237	308	671			
Volume Left (vph)	196	50	0			
Volume Right (vph)	41	0	312			
Hadj (s)	0.06	0.03	-0.28			
Departure Headway (s)	6.4	5.7	4.9			
Degree Utilization, x	0.42	0.48	0.92			
Capacity (veh/h)	545	617	725			
Control Delay (s)	13.9	13.9	38.0			
Approach Delay (s)	13.9	13.9	38.0			
Approach LOS	B	B	E			
Intersection Summary						
Delay			27.2			
Level of Service			D			
Intersection Capacity Utilization			70.7%	ICU Level of Service	C	
Analysis Period (min)			15			

Intersection	
Intersection Delay, s/veh	26.5
Intersection LOS	D

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑	↑	
Traffic Vol, veh/h	180	38	46	237	330	287
Future Vol, veh/h	180	38	46	237	330	287
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	196	41	50	258	359	312
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	13.8	13.8	36.8
HCM LOS	B	B	E

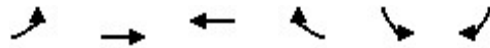
Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	16%	83%	0%
Vol Thru, %	84%	0%	53%
Vol Right, %	0%	17%	47%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	283	218	617
LT Vol	46	180	0
Through Vol	237	0	330
RT Vol	0	38	287
Lane Flow Rate	308	237	671
Geometry Grp	1	1	1
Degree of Util (X)	0.48	0.416	0.909
Departure Headway (Hd)	5.614	6.317	4.877
Convergence, Y/N	Yes	Yes	Yes
Cap	640	569	744
Service Time	3.672	4.376	2.922
HCM Lane V/C Ratio	0.481	0.417	0.902
HCM Control Delay	13.8	13.8	36.8
HCM Lane LOS	B	B	E
HCM 95th-tile Q	2.6	2	12.2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	133	97	161	58	33	149
Future Volume (vph)	133	97	161	58	33	149
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			0.964		0.890	
Flt Protected		0.972			0.991	
Satd. Flow (prot)	0	1847	1832	0	1676	0
Flt Permitted		0.972			0.991	
Satd. Flow (perm)	0	1847	1832	0	1676	0
Link Speed (mph)		30	30		25	
Link Distance (ft)		546	304		789	
Travel Time (s)		12.4	6.9		21.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	148	108	179	64	37	166
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	256	243	0	203	0
Sign Control		Free	Free		Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	45.5%
ICU Level of Service	A
Analysis Period (min)	15



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	133	97	161	58	33	149
Future Volume (Veh/h)	133	97	161	58	33	149
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	148	108	179	64	37	166
<b>Pedestrians</b>						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	243			615	211	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	243			615	211	
tC, single (s)	4.1			6.4	6.2	
tC, 2 stage (s)						
tF (s)	2.2			3.5	3.3	
p0 queue free %	89			91	80	
cM capacity (veh/h)	1335			407	834	
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>SB 1</b>			
Volume Total	256	243	203			
Volume Left	148	0	37			
Volume Right	0	64	166			
cSH	1335	1700	700			
Volume to Capacity	0.11	0.14	0.29			
Queue Length 95th (ft)	9	0	30			
Control Delay (s)	5.0	0.0	12.2			
Lane LOS	A		B			
Approach Delay (s)	5.0	0.0	12.2			
Approach LOS			B			
<b>Intersection Summary</b>						
Average Delay			5.4			
Intersection Capacity Utilization			45.5%	ICU Level of Service	A	
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	5.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↔		↕	
Traffic Vol, veh/h	133	97	161	58	33	149
Future Vol, veh/h	133	97	161	58	33	149
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	148	108	179	64	37	166

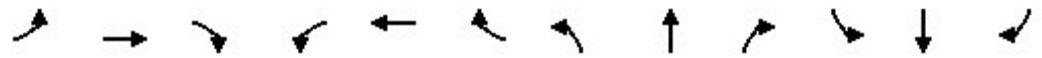
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	243	0	0	615	211
Stage 1	-	-	-	211	-
Stage 2	-	-	-	404	-
Critical Hdwy	4.1	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	3.5	3.3
Pot Cap-1 Maneuver	1335	-	-	458	834
Stage 1	-	-	-	829	-
Stage 2	-	-	-	679	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1335	-	-	404	834
Mov Cap-2 Maneuver	-	-	-	404	-
Stage 1	-	-	-	731	-
Stage 2	-	-	-	679	-

Approach	EB	WB	SB
HCM Control Delay, s	4.6	0	12.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1335	-	-	-	699
HCM Lane V/C Ratio	0.111	-	-	-	0.289
HCM Control Delay (s)	8	0	-	-	12.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.4	-	-	-	1.2

Farmington Connectivity Study  
13: Stafford Ave & Stevens St

Existing Conditions  
PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	37	145	58	74	274	36	119	271	64	22	213	40
Future Volume (vph)	37	145	58	74	274	36	119	271	64	22	213	40
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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00				1.00
Frt		0.967			0.987			0.981			0.980	
Flt Protected		0.992			0.990			0.987			0.996	
Satd. Flow (prot)	0	1823	0	0	1857	0	0	1840	0	0	1849	0
Flt Permitted		0.913			0.898			0.738			0.948	
Satd. Flow (perm)	0	1677	0	0	1684	0	0	1375	0	0	1760	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		543			653			565			383	
Travel Time (s)		12.3			14.8			12.8			8.7	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	38	148	59	76	280	37	121	277	65	22	217	41
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	245	0	0	393	0	0	463	0	0	280	0
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	81		20	81		20	116		20	106	
Trailing Detector (ft)	0	75		0	75		0	110		0	100	
Detector 1 Position(ft)	0	75		0	75		0	110		0	100	
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	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4				4
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	19.0	19.0		19.0	19.0		19.0	19.0		19.0	19.0	
Total Split (s)	34.0	34.0		34.0	34.0		29.0	29.0		29.0	29.0	
Total Split (%)	41.5%	41.5%		41.5%	41.5%		35.4%	35.4%		35.4%	35.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	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			4.0			4.0	
Lead/Lag							Lag	Lag		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	19.0
Total Split (s)	19.0
Total Split (%)	23%
Maximum Green (s)	17.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes

Farmington Connectivity Study  
13: Stafford Ave & Stevens St

Existing Conditions  
PM Peak

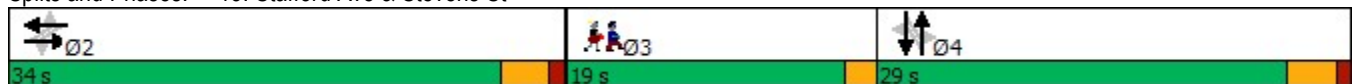


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	5.0	5.0		5.0	5.0		2.0	2.0		2.0	2.0	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		30.0			30.0			25.0			25.0	
Actuated g/C Ratio		0.37			0.37			0.30			0.30	
v/c Ratio		0.40			0.64			1.11			0.52	
Control Delay		21.8			27.2			105.6			27.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		21.8			27.2			105.6			27.8	
LOS		C			C			F			C	
Approach Delay		21.8			27.2			105.6			27.8	
Approach LOS		C			C			F			C	
Queue Length 50th (ft)		92			164			~275			118	
Queue Length 95th (ft)		154			260			#454			193	
Internal Link Dist (ft)		463			573			485			303	
Turn Bay Length (ft)												
Base Capacity (vph)		613			616			419			536	
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			0.64			1.11			0.52	

Intersection Summary

Area Type:	Other
Cycle Length:	82
Actuated Cycle Length:	82
Natural Cycle:	75
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.11
Intersection Signal Delay:	52.6
Intersection Capacity Utilization	79.5%
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: 13: Stafford Ave & Stevens St



Lane Group	Ø3
Vehicle Extension (s)	3.0
Recall Mode	Ped
Walk Time (s)	7.0
Flash Dont Walk (s)	10.0
Pedestrian Calls (#/hr)	1
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

Farmington Connectivity Study  
 14: S Main St (RT 177) & Mill St

Existing Conditions  
 PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	18	89	107	19	31	98	654	125	22	708	21
Future Volume (vph)	45	18	89	107	19	31	98	654	125	22	708	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		95	0		100	60		0	0		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
Frt			0.850			0.850		0.976			0.996	
Flt Protected		0.966			0.959		0.950			0.950		
Satd. Flow (prot)	0	1817	1599	0	1804	1599	1787	1836	0	1787	1874	0
Flt Permitted		0.667			0.709		0.159			0.226		
Satd. Flow (perm)	0	1255	1599	0	1334	1599	299	1836	0	425	1874	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			30			25			25	
Link Distance (ft)		906			356			584			461	
Travel Time (s)		24.7			8.1			15.9			12.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	50	20	99	119	21	34	109	727	139	24	787	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	70	99	0	140	34	109	866	0	24	810	0
Number of Detectors	1	1	1	1	1	1	1	0		0	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	50	50	20	40	40	50	0		0	0	
Trailing Detector (ft)	0	0	0	0	-10	-10	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	-10	-10	0	0		0	0	
Detector 1 Size(ft)	20	50	50	20	50	50	50	6		20	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	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	pm+ov	Perm	NA	Prot	D.P+P	NA		Perm	NA	
Protected Phases		4	2		4	4	2	1 2				1
Permitted Phases	4		4	4			1			1		
Detector Phase	4	4	2	4	4	4	2	2		1	1	
Switch Phase												
Minimum Initial (s)	6.0	6.0	5.0	6.0	6.0	6.0	5.0			25.0	25.0	
Minimum Split (s)	10.3	10.3	9.6	10.3	10.3	10.3	9.6			29.6	29.6	
Total Split (s)	21.3	21.3	15.6	21.3	21.3	21.3	15.6			49.6	49.6	
Total Split (%)	19.1%	19.1%	14.0%	19.1%	19.1%	19.1%	14.0%			44.5%	44.5%	
Maximum Green (s)	17.0	17.0	11.0	17.0	17.0	17.0	11.0			45.0	45.0	
Yellow Time (s)	3.2	3.2	3.6	3.2	3.2	3.2	3.6			3.6	3.6	
All-Red Time (s)	1.1	1.1	1.0	1.1	1.1	1.1	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)		4.3	4.6		4.3	4.3	4.6			4.6	4.6	
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag			Lead	Lead	

Lane Group	Ø3
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)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	25.0
Total Split (s)	25.0
Total Split (%)	22%
Maximum Green (s)	21.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead

Farmington Connectivity Study  
 14: S Main St (RT 177) & Mill St

Existing Conditions  
 PM Peak

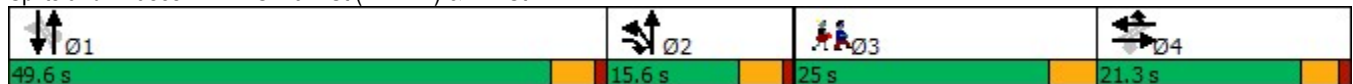


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5			3.0	3.0	
Recall Mode	None	None	None	None	None	None	None			Max	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		12.5	27.2		12.5	12.5	55.5	60.1		45.1	45.1	
Actuated g/C Ratio		0.15	0.33		0.15	0.15	0.68	0.74		0.55	0.55	
v/c Ratio		0.36	0.19		0.69	0.14	0.28	0.64		0.10	0.78	
Control Delay		36.4	19.8		50.2	30.7	9.2	8.7		11.5	22.3	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.8		0.0	7.8	
Total Delay		36.4	19.8		50.2	30.7	9.2	9.5		11.5	30.0	
LOS		D	B		D	C	A	A		B	C	
Approach Delay		26.7			46.4			9.5			29.5	
Approach LOS		C			D			A			C	
Queue Length 50th (ft)		33	35		69	15	13	180		6	311	
Queue Length 95th (ft)		71	70		128	40	31	347		20	#589	
Internal Link Dist (ft)		826			276			504			381	
Turn Bay Length (ft)			95			100	60					
Base Capacity (vph)		262	508		279	334	407	1368		235	1037	
Starvation Cap Reductn		0	0		0	0	0	228		0	191	
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		0.27	0.19		0.50	0.10	0.27	0.76		0.10	0.96	

Intersection Summary

Area Type: Other  
 Cycle Length: 111.5  
 Actuated Cycle Length: 81.5  
 Natural Cycle: 120  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.78  
 Intersection Signal Delay: 21.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 87.7%  
 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.

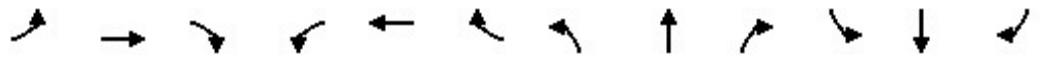
Splits and Phases: 14: S Main St (RT 177) & Mill St



Lane Group	Ø3
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	14.0
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	
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	

Farmington Connectivity Study  
 15: S Main St (RT 177) & Railroad Ave/New Britain Ave

Existing Conditions  
 PM Peak

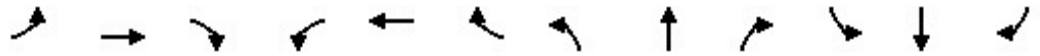


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (vph)	12	6	22	32	9	227	8	634	27	167	716	8
Future Volume (vph)	12	6	22	32	9	227	8	634	27	167	716	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		200	80		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			80			50		
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		0.97			0.98		1.00				1.00	
Frt		0.926				0.850		0.994			0.998	
Flt Protected		0.985			0.963		0.950			0.950		
Satd. Flow (prot)	0	1667	0	0	1812	1599	1787	1870	0	1787	1877	0
Flt Permitted		0.903			0.744		0.220			0.142		
Satd. Flow (perm)	0	1528	0	0	1370	1599	414	1870	0	267	1877	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			30			25			25	
Link Distance (ft)		579			590			1222			584	
Travel Time (s)		15.8			13.4			33.3			15.9	
Confl. Peds. (#/hr)			5	5			3					3
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	13	7	24	35	10	249	9	697	30	184	787	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	44	0	0	45	249	9	727	0	184	796	0
Number of Detectors	1	1		1	1	1	0	2		1	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40	40	0	206		50	206	
Trailing Detector (ft)	0	-10		0	-10	-10	0	100		0	100	
Detector 1 Position(ft)	0	-10		0	-10	-10	0	100		0	100	
Detector 1 Size(ft)	20	50		20	50	50	20	6		50	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)								200			200	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		D.P+P	NA	
Protected Phases		4			4	24		1		2	12	
Permitted Phases	4			4			1			1		
Detector Phase	4	4		4	4	4	1	1		2	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		25.0	25.0		5.0		
Minimum Split (s)	10.2	10.2		10.2	10.2		29.6	29.6		9.6		
Total Split (s)	14.2	14.2		14.2	14.2		74.6	74.6		19.6		

Lane Group	Ø3
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)	
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	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	23.0
Total Split (s)	23.0

Farmington Connectivity Study  
 15: S Main St (RT 177) & Railroad Ave/New Britain Ave

Existing Conditions  
 PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	10.8%	10.8%		10.8%	10.8%		56.8%	56.8%		14.9%		
Maximum Green (s)	10.0	10.0		10.0	10.0		70.0	70.0		15.0		
Yellow Time (s)	3.2	3.2		3.2	3.2		3.6	3.6		3.6		
All-Red Time (s)	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		
Total Lost Time (s)		4.2			4.2		4.6	4.6		4.6		
Lead/Lag	Lag	Lag		Lag	Lag		Lead	Lead		Lag		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes		
Vehicle Extension (s)	1.5	1.5		1.5	1.5		2.5	2.5		1.5		
Recall Mode	None	None		None	None		Min	Min		None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		7.9			7.9	23.3	34.1	34.1		45.3	50.5	
Actuated g/C Ratio		0.11			0.11	0.33	0.48	0.48		0.64	0.71	
v/c Ratio		0.26			0.30	0.47	0.05	0.81		0.45	0.59	
Control Delay		41.8			43.2	24.4	13.1	25.1		19.1	8.4	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.2	
Total Delay		41.8			43.2	24.4	13.1	25.1		19.1	8.6	
LOS		D			D	C	B	C		B	A	
Approach Delay		41.8			27.2			24.9			10.6	
Approach LOS		D			C			C			B	
Queue Length 50th (ft)		15			15	59	2	226		14	92	
Queue Length 95th (ft)		75			76	#230	13	609		95	470	
Internal Link Dist (ft)		499			510			1142			504	
Turn Bay Length (ft)						200	80			120		
Base Capacity (vph)		240			215	600	378	1706		550	1483	
Starvation Cap Reductn		0			0	0	0	0		0	167	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.18			0.21	0.41	0.02	0.43		0.33	0.60	

Intersection Summary

Area Type: Other  
 Cycle Length: 131.4  
 Actuated Cycle Length: 70.8  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.81  
 Intersection Signal Delay: 18.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 79.5%  
 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: 15: S Main St (RT 177) & Railroad Ave/New Britain Ave



Lane Group	Ø3
Total Split (%)	18%
Maximum Green (s)	19.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	11
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

Farmington Connectivity Study  
 16: S Main St (RT 177) & Webster St

Existing Conditions  
 PM Peak



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	32	36	56	653	688	58
Future Volume (vph)	32	36	56	653	688	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.928					0.990
Flt Protected	0.977					0.996
Satd. Flow (prot)	1706	0	0	1874	1862	0
Flt Permitted	0.977					0.996
Satd. Flow (perm)	1706	0	0	1874	1862	0
Link Speed (mph)	25					25
Link Distance (ft)	805					1222
Travel Time (s)	22.0					33.3
Confl. Peds. (#/hr)				2		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	33	38	58	680	717	60
Shared Lane Traffic (%)						
Lane Group Flow (vph)	71	0	0	738	777	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	91.2%
ICU Level of Service	F
Analysis Period (min)	15

Farmington Connectivity Study  
 16: S Main St (RT 177) & Webster St

Existing Conditions  
 PM Peak



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	32	36	56	653	688	58
Future Volume (Veh/h)	32	36	56	653	688	58
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	33	38	58	680	717	60
Pedestrians	2					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)					1222	
pX, platoon unblocked	0.77	0.77	0.77			
vC, conflicting volume	1545	749	779			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1558	524	563			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	63	91	93			
cM capacity (veh/h)	88	426	778			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	71	738	777			
Volume Left	33	58	0			
Volume Right	38	0	60			
cSH	154	778	1700			
Volume to Capacity	0.46	0.07	0.46			
Queue Length 95th (ft)	53	6	0			
Control Delay (s)	47.1	1.9	0.0			
Lane LOS	E	A				
Approach Delay (s)	47.1	1.9	0.0			
Approach LOS	E					
<b>Intersection Summary</b>						
Average Delay			3.0			
Intersection Capacity Utilization			91.2%	ICU Level of Service	F	
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	32	36	56	653	688	58
Future Vol, veh/h	32	36	56	653	688	58
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	33	38	58	680	717	60

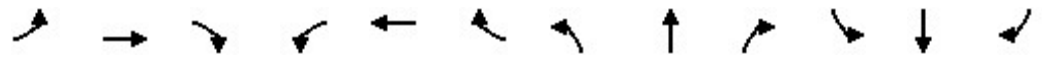
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1545	749	779	0	-	0
Stage 1	749	-	-	-	-	-
Stage 2	796	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	127	413	842	-	-	-
Stage 1	469	-	-	-	-	-
Stage 2	446	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	112	412	840	-	-	-
Mov Cap-2 Maneuver	112	-	-	-	-	-
Stage 1	416	-	-	-	-	-
Stage 2	445	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	36.9	0.8	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	840	-	182	-	-
HCM Lane V/C Ratio	0.069	-	0.389	-	-
HCM Control Delay (s)	9.6	0	36.9	-	-
HCM Lane LOS	A	A	E	-	-
HCM 95th %tile Q(veh)	0.2	-	1.7	-	-

Farmington Connectivity Study  
 17: Plainville Ave (RT 177) & Coopermine Rd

Existing Conditions  
 PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	147	41	23	32	78	45	61	688	36	26	482	179
Future Volume (vph)	147	41	23	32	78	45	61	688	36	26	482	179
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	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.985			0.961			0.994			0.965	
Fl <sub>t</sub> Protected		0.966			0.990			0.996			0.998	
Satd. Flow (prot)	0	1790	0	0	1790	0	0	1862	0	0	1812	0
Fl <sub>t</sub> Permitted		0.657			0.909			0.901			0.955	
Satd. Flow (perm)	0	1217	0	0	1643	0	0	1685	0	0	1734	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			20			4			27	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		498			472			529			491	
Travel Time (s)		9.7			9.2			10.3			9.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	152	42	24	33	80	46	63	709	37	27	497	185
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	218	0	0	159	0	0	809	0	0	709	0
Number of Detectors	1	3		1	3		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	24		20	24		20	361		20	361	
Trailing Detector (ft)	0	-10		0	-10		0	185		0	185	
Detector 1 Position(ft)	0	-10		0	-10		0	185		0	185	
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)		6			6			355			355	
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	
Detector 3 Position(ft)		18			18							
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	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	20.5	20.5		20.5	20.5		21.9	21.9		21.9	21.9	
Total Split (s)	40.5	40.5		40.5	40.5		66.9	66.9		66.9	66.9	

Farmington Connectivity Study  
 17: Plainville Ave (RT 177) & Coopermine Rd

Existing Conditions  
 PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	37.7%	37.7%		37.7%	37.7%		62.3%	62.3%		62.3%	62.3%	
Maximum Green (s)	35.0	35.0		35.0	35.0		60.0	60.0		60.0	60.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		4.4	4.4		4.4	4.4	
All-Red Time (s)	2.2	2.2		2.2	2.2		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.5			5.5			6.9			6.9	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5		1.5	1.5		5.0	5.0		5.0	5.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	14.0	14.0		14.0	14.0							
Flash Dont Walk (s)	1.0	1.0		1.0	1.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		19.4			19.4			56.1			56.1	
Actuated g/C Ratio		0.22			0.22			0.64			0.64	
v/c Ratio		0.80			0.42			0.75			0.64	
Control Delay		54.8			29.9			18.4			13.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		54.8			29.9			18.4			13.8	
LOS		D			C			B			B	
Approach Delay		54.8			29.9			18.4			13.8	
Approach LOS		D			C			B			B	
Queue Length 50th (ft)		119			70			280			206	
Queue Length 95th (ft)		201			127			590			430	
Internal Link Dist (ft)		418			392			449			411	
Turn Bay Length (ft)												
Base Capacity (vph)		500			683			1181			1222	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.44			0.23			0.69			0.58	

Intersection Summary

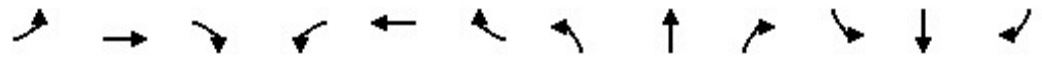
Area Type: Other  
 Cycle Length: 107.4  
 Actuated Cycle Length: 88.3  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.80  
 Intersection Signal Delay: 21.8  
 Intersection Capacity Utilization 98.4%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service F

Splits and Phases: 17: Plainville Ave (RT 177) & Coopermine Rd



Farmington Connectivity Study  
 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd

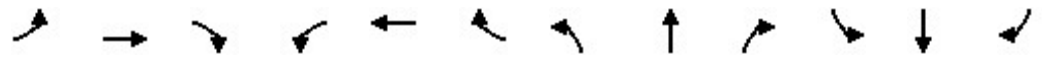
Existing Conditions  
 PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (vph)	22	82	133	35	183	73	277	759	24	50	487	40
Future Volume (vph)	22	82	133	35	183	73	277	759	24	50	487	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	250		0	80		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			100			40		
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		0.924			0.966			0.995			0.989	
Flt Protected		0.995			0.994		0.950			0.950		
Satd. Flow (prot)	0	1730	0	0	1806	0	1787	1872	0	1787	1860	0
Flt Permitted		0.941			0.919		0.274			0.198		
Satd. Flow (perm)	0	1636	0	0	1670	0	515	1872	0	372	1860	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					13			2				5
Link Speed (mph)		30			30			45				45
Link Distance (ft)		594			761			713				527
Travel Time (s)		13.5			17.3			10.8				8.0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	22	84	136	36	187	74	283	774	24	51	497	41
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	242	0	0	297	0	283	798	0	51	538	0
Number of Detectors	1	3		1	2		3	1		3	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	18		20	12		24	356		24	206	
Trailing Detector (ft)	0	-10		0	-6		-6	350		-6	200	
Detector 1 Position(ft)	0	-10		0	-6		-6	350		-6	200	
Detector 1 Size(ft)	20	6		20	6		6	6		6	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)		0			6		6			6		
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		
Detector 3 Position(ft)		12					18			18		
Detector 3 Size(ft)		6					6			6		
Detector 3 Type		Cl+Ex					Cl+Ex			Cl+Ex		
Detector 3 Channel												
Detector 3 Extend (s)		0.0					0.0			0.0		
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		5	2		1	6	
Switch Phase												

Farmington Connectivity Study  
 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd

Existing Conditions  
 PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	7.0	7.0		7.0	7.0		3.0	30.0		3.0	30.0	
Minimum Split (s)	30.9	30.9		30.9	30.9		7.0	37.1		7.0	37.1	
Total Split (s)	34.9	34.9		34.9	34.9		19.0	67.1		12.0	67.1	
Total Split (%)	28.8%	28.8%		28.8%	28.8%		15.7%	55.5%		9.9%	55.5%	
Maximum Green (s)	30.0	30.0		30.0	30.0		15.0	60.0		8.0	60.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.0	4.4		3.0	4.4	
All-Red Time (s)	1.6	1.6		1.6	1.6		1.0	2.7		1.0	2.7	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.9			4.9		4.0	7.1		4.0	7.1	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)	25.0	25.0		25.0	25.0							
Flash Dont Walk (s)	1.0	1.0		1.0	1.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		21.2			21.2		58.7	47.9		48.0	39.1	
Actuated g/C Ratio		0.24			0.24		0.66	0.54		0.54	0.44	
v/c Ratio		0.62			0.73		0.55	0.79		0.18	0.66	
Control Delay		39.7			42.8		11.1	25.6		8.5	25.2	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		39.7			42.8		11.1	25.6		8.5	25.2	
LOS		D			D		B	C		A	C	
Approach Delay		39.7			42.8			21.8			23.7	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)		117			142		58	363		9	234	
Queue Length 95th (ft)		236			282		116	633		26	405	
Internal Link Dist (ft)		514			681			633			447	
Turn Bay Length (ft)							250			80		
Base Capacity (vph)		572			593		561	1496		343	1304	
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		0.42			0.50		0.50	0.53		0.15	0.41	

Intersection Summary

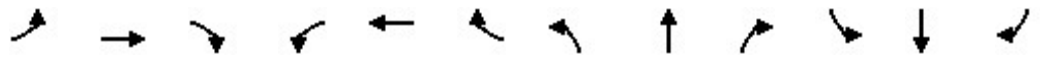
Area Type: Other  
 Cycle Length: 121  
 Actuated Cycle Length: 89.2  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 27.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 80.9%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd



Farmington Connectivity Study  
 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)

Existing Conditions  
 PM Peak

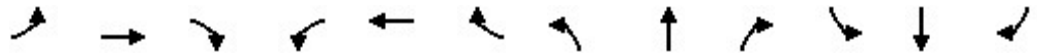


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	151	404	129	122	658	220	129	670	72	139	457	135
Future Volume (vph)	151	404	129	122	658	220	129	670	72	139	457	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260		260	180		0	250		250	165		165
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (ft)	190			170			150			115		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor				1.00						1.00		
Frt			0.850		0.962				0.850		0.966	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1881	1599	1787	3438	0	1787	1881	1599	1787	3453	0
Flt Permitted	0.950			0.950			0.286			0.088		
Satd. Flow (perm)	1787	1881	1599	1782	3438	0	538	1881	1599	166	3453	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			120		25				65		21	
Link Speed (mph)		45			45			40			45	
Link Distance (ft)		780			1567			643			474	
Travel Time (s)		11.8			23.7			11.0			7.2	
Confl. Peds. (#/hr)			2	2					1	1		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	154	412	132	124	671	224	132	684	73	142	466	138
Shared Lane Traffic (%)												
Lane Group Flow (vph)	154	412	132	124	895	0	132	684	73	142	604	0
Number of Detectors	3	2	2	3	2		3	3	3	3	3	
Detector Template												
Leading Detector (ft)	24	306	306	24	306		24	24	24	24	24	
Trailing Detector (ft)	-6	150	150	-6	150		-6	-6	-6	-6	-6	
Detector 1 Position(ft)	-6	150	150	-6	150		-6	-6	-6	-6	-6	
Detector 1 Size(ft)	6	6	6	6	6		6	6	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	6	300	300	6	300		6	6	6	6	6	
Detector 2 Size(ft)	6	6	6	6	6		6	6	6	6	6	
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 3 Position(ft)	18			18			18	18	18	18	18	
Detector 3 Size(ft)	6			6			6	6	6	6	6	
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0	0.0	0.0	0.0	
Turn Type	Prot	NA	Prot	Prot	NA		pm+pt	NA	pt+ov	pm+pt	NA	
Protected Phases	1	6	6	5	2		3	8	5 8	7	4	
Permitted Phases							8			4		

Lane Group	Ø9
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)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	

Farmington Connectivity Study  
 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)

Existing Conditions  
 PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6	6	5	2		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0		5.0	9.0		5.0	9.0	
Minimum Split (s)	9.0	20.2	20.2	9.0	20.2		9.0	14.7		9.0	14.7	
Total Split (s)	25.0	35.2	35.2	25.0	45.2		22.0	50.7		14.0	45.7	
Total Split (%)	14.7%	20.7%	20.7%	14.7%	26.6%		12.9%	29.8%		8.2%	26.9%	
Maximum Green (s)	21.0	30.0	30.0	21.0	40.0		18.0	45.0		10.0	40.0	
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2		3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.2		1.0	1.2	
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)	4.0	5.2	5.2	4.0	5.2		4.0	5.7		4.0	5.7	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	2.5	2.5	1.5	2.5		2.0	3.0		2.0	2.0	
Recall Mode	None	Min	Min	None	Min		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	15.2	42.4	42.4	13.3	40.5		57.9	46.1	64.6	57.3	45.5	
Actuated g/C Ratio	0.11	0.31	0.31	0.10	0.30		0.43	0.34	0.47	0.42	0.33	
v/c Ratio	0.78	0.71	0.23	0.71	0.86		0.40	1.08	0.09	0.75	0.52	
Control Delay	85.8	50.8	10.0	83.0	53.9		28.7	100.5	4.7	53.4	40.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	85.8	50.8	10.0	83.0	53.9		28.7	100.5	4.7	53.4	40.0	
LOS	F	D	B	F	D		C	F	A	D	D	
Approach Delay		50.8			57.4			82.0			42.6	
Approach LOS		D			E			F			D	
Queue Length 50th (ft)	126	296	7	102	356		62	~619	3	67	201	
Queue Length 95th (ft)	#255	#662	70	207	#712		154	#1218	24	#267	392	
Internal Link Dist (ft)		700			1487			563			394	
Turn Bay Length (ft)	260		260	180			250		250	165		
Base Capacity (vph)	279	584	579	279	1041		412	671	782	190	1167	
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	0.71	0.23	0.44	0.86		0.32	1.02	0.09	0.75	0.52	










Intersection Summary

Area Type: Other  
 Cycle Length: 169.9  
 Actuated Cycle Length: 136.2  
 Natural Cycle: 145  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.08  
 Intersection Signal Delay: 59.2  
 Intersection LOS: E  
 Intersection Capacity Utilization 92.3%  
 ICU Level of Service F  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.

Lane Group	Ø9
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	32.0
Total Split (s)	32.0
Total Split (%)	19%
Maximum Green (s)	28.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
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)	21.0
Pedestrian Calls (#/hr)	4
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	

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

Splits and Phases: 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)

 Ø1	 Ø2	 Ø3	 Ø4	 Ø9
25 s	45.2 s	22 s	45.7 s	32 s
 Ø5	 Ø6	 Ø7	 Ø8	
25 s	35.2 s	14 s	50.7 s	

Farmington Connectivity Study  
 20: Unionville Ave (RT 177) & Northwest Dr

Existing Conditions  
 PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	81	76	201	192	142	94	842	59	85	558	14
Future Volume (vph)	26	81	76	201	192	142	94	842	59	85	558	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	210		0	260		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
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		0.927			0.936			0.990			0.996	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1727	0	1770	1744	0	1770	3504	0	1770	3523	0
Flt Permitted	0.552			0.481			0.326			0.152		
Satd. Flow (perm)	1028	1727	0	896	1744	0	607	3504	0	283	3523	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			27			5				2
Link Speed (mph)		35			35			40				40
Link Distance (ft)		710			592			572				675
Travel Time (s)		13.8			11.5			9.8				11.5
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	27	84	79	209	200	148	98	877	61	89	581	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	163	0	209	348	0	98	938	0	89	596	0
Number of Detectors	3	3		3	3		3	2		3	2	
Detector Template												
Leading Detector (ft)	24	24		24	24		24	331		24	331	
Trailing Detector (ft)	-6	-6		-6	-6		-6	150		-6	150	
Detector 1 Position(ft)	-6	-6		-6	-6		-6	150		-6	150	
Detector 1 Size(ft)	6	6		6	6		6	6		6	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)	6	6		6	6		6	325		6	325	
Detector 2 Size(ft)	6	6		6	6		6	6		6	6	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 3 Position(ft)	18	18		18	18		18			18		
Detector 3 Size(ft)	6	6		6	6		6			6		
Detector 3 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex		
Detector 3 Channel												
Detector 3 Extend (s)	0.0	0.0		0.0	0.0		0.0			0.0		
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	

Lane Group	Ø9
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	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	

Farmington Connectivity Study  
 20: Unionville Ave (RT 177) & Northwest Dr

Existing Conditions  
 PM Peak

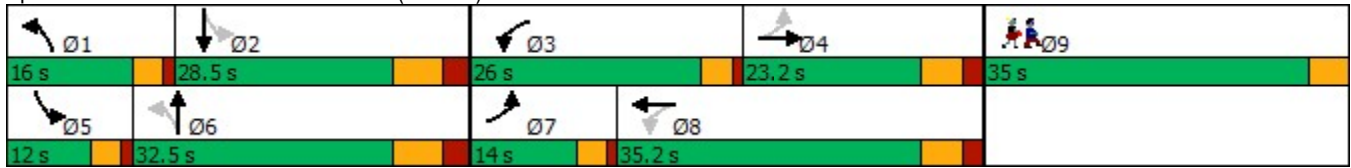


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
<b>Switch Phase</b>												
Minimum Initial (s)	4.0	9.0		4.0	9.0		4.0	15.0		4.0	15.0	
Minimum Split (s)	8.0	15.2		8.0	15.2		8.0	22.5		8.0	22.5	
Total Split (s)	14.0	23.2		26.0	35.2		16.0	32.5		12.0	28.5	
Total Split (%)	10.9%	18.0%		20.2%	27.4%		12.4%	25.3%		9.3%	22.1%	
Maximum Green (s)	10.0	17.0		22.0	29.0		12.0	25.0		8.0	21.0	
Yellow Time (s)	3.0	4.1		3.0	4.1		3.0	4.8		3.0	4.8	
All-Red Time (s)	1.0	2.1		1.0	2.1		1.0	2.7		1.0	2.7	
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	6.2		4.0	6.2		4.0	7.5		4.0	7.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	3.0		1.5	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
<b>Walk Time (s)</b>												
<b>Flash Dont Walk (s)</b>												
<b>Pedestrian Calls (#/hr)</b>												
Act Effct Green (s)	20.9	12.7		31.3	25.4		36.5	26.8		35.5	26.3	
Actuated g/C Ratio	0.25	0.15		0.37	0.30		0.44	0.32		0.43	0.31	
v/c Ratio	0.09	0.57		0.45	0.63		0.27	0.83		0.37	0.54	
Control Delay	22.0	39.1		24.4	33.0		20.5	37.4		23.4	30.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	22.0	39.1		24.4	33.0		20.5	37.4		23.4	30.8	
LOS	C	D		C	C		C	D		C	C	
Approach Delay		36.7			29.8			35.8			29.9	
Approach LOS		D			C			D			C	
Queue Length 50th (ft)	8	59		68	120		21	205		19	115	
Queue Length 95th (ft)	36	184		196	#391		105	#680		96	#401	
Internal Link Dist (ft)		630			512			492			595	
Turn Bay Length (ft)							210			260		
Base Capacity (vph)	411	400		582	672		463	1126		275	1108	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.07	0.41		0.36	0.52		0.21	0.83		0.32	0.54	

**Intersection Summary**

Area Type: Other  
 Cycle Length: 128.7  
 Actuated Cycle Length: 83.5  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.83  
 Intersection Signal Delay: 32.9  
 Intersection LOS: C  
 Intersection Capacity Utilization 70.1%  
 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.

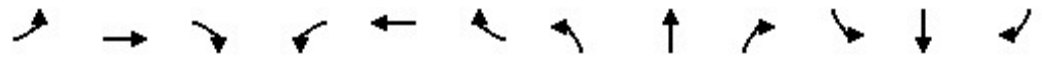
Splits and Phases: 20: Unionville Ave (RT 177) & Northwest Dr



Lane Group	Ø9
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	35.0
Total Split (s)	35.0
Total Split (%)	27%
Maximum Green (s)	31.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
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)	24.0
Pedestrian Calls (#/hr)	1
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

Farmington Connectivity Study  
 21: New Britain Ave & Red Oak Hill Rd

Existing Conditions  
 PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	9	139	42	24	181	133	121	182	21	159	98	5
Future Volume (vph)	9	139	42	24	181	133	121	182	21	159	98	5
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	1.00	1.00	1.00	1.00	1.00
Frt		0.970			0.947			0.991			0.998	
Flt Protected		0.998			0.996			0.982			0.971	
Satd. Flow (prot)	0	1803	0	0	1757	0	0	1813	0	0	1805	0
Flt Permitted		0.998			0.996			0.982			0.971	
Satd. Flow (perm)	0	1803	0	0	1757	0	0	1813	0	0	1805	0
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		506			528			2775			1031	
Travel Time (s)		9.9			10.3			63.1			23.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	10	148	45	26	193	141	129	194	22	169	104	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	203	0	0	360	0	0	345	0	0	278	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

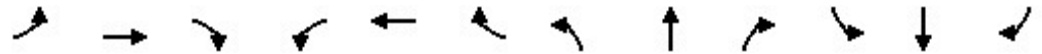
Control Type: Unsignalized

Intersection Capacity Utilization 56.6% ICU Level of Service B

Analysis Period (min) 15

Farmington Connectivity Study  
 21: New Britain Ave & Red Oak Hill Rd

Existing Conditions  
 PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	9	139	42	24	181	133	121	182	21	159	98	5
Future Volume (vph)	9	139	42	24	181	133	121	182	21	159	98	5
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	10	148	45	26	193	141	129	194	22	169	104	5

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	203	360	345	278
Volume Left (vph)	10	26	129	169
Volume Right (vph)	45	141	22	5
Hadj (s)	-0.09	-0.19	0.07	0.14
Departure Headway (s)	6.8	6.3	6.5	6.8
Degree Utilization, x	0.39	0.63	0.63	0.52
Capacity (veh/h)	450	520	510	476
Control Delay (s)	14.1	19.6	19.9	17.0
Approach Delay (s)	14.1	19.6	19.9	17.0
Approach LOS	B	C	C	C

Intersection Summary			
Delay		18.1	
Level of Service		C	
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		

Intersection	
Intersection Delay, s/veh	18
Intersection LOS	C

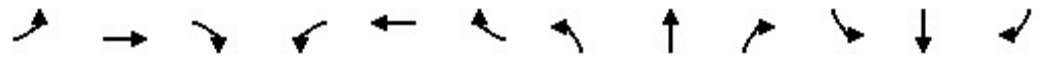
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	139	42	24	181	133	121	182	21	159	98	5
Future Vol, veh/h	9	139	42	24	181	133	121	182	21	159	98	5
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	148	45	26	193	141	129	194	22	169	104	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14	19.4	19.7	16.9
HCM LOS	B	C	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	37%	5%	7%	61%
Vol Thru, %	56%	73%	54%	37%
Vol Right, %	6%	22%	39%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	324	190	338	262
LT Vol	121	9	24	159
Through Vol	182	139	181	98
RT Vol	21	42	133	5
Lane Flow Rate	345	202	360	279
Geometry Grp	1	1	1	1
Degree of Util (X)	0.62	0.379	0.626	0.519
Departure Headway (Hd)	6.48	6.755	6.266	6.704
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	555	530	572	535
Service Time	4.555	4.844	4.339	4.783
HCM Lane V/C Ratio	0.622	0.381	0.629	0.521
HCM Control Delay	19.7	14	19.4	16.9
HCM Lane LOS	C	B	C	C
HCM 95th-tile Q	4.2	1.8	4.3	3

Farmington Connectivity Study  
 22: New Britain Ave & Meadow Rd

Existing Conditions  
 PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	65	94	49	9	123	11	120	303	14	2	124	42
Future Volume (vph)	65	94	49	9	123	11	120	303	14	2	124	42
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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.968			0.990			0.996			0.966	
Flt Protected		0.985			0.997			0.986			0.999	
Satd. Flow (prot)	0	1776	0	0	1839	0	0	1829	0	0	1798	0
Flt Permitted		0.985			0.997			0.986			0.999	
Satd. Flow (perm)	0	1776	0	0	1839	0	0	1829	0	0	1798	0
Link Speed (mph)		30			35			30			30	
Link Distance (ft)		414			396			469			2775	
Travel Time (s)		9.4			7.7			10.7			63.1	
Confl. Peds. (#/hr)			14	14			8		17	17		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)	71	102	53	10	134	12	130	329	15	2	135	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	226	0	0	156	0	0	474	0	0	183	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	67.2%
Analysis Period (min)	15
	ICU Level of Service C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	65	94	49	9	123	11	120	303	14	2	124	42
Future Volume (vph)	65	94	49	9	123	11	120	303	14	2	124	42
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
Hourly flow rate (vph)	71	102	53	10	134	12	130	329	15	2	135	46

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	226	156	474	183
Volume Left (vph)	71	10	130	2
Volume Right (vph)	53	12	15	46
Hadj (s)	-0.04	0.00	0.07	-0.11
Departure Headway (s)	6.1	6.3	5.5	5.8
Degree Utilization, x	0.38	0.27	0.73	0.30
Capacity (veh/h)	532	489	629	543
Control Delay (s)	12.8	11.6	21.6	11.3
Approach Delay (s)	12.8	11.6	21.6	11.3
Approach LOS	B	B	C	B

Intersection Summary			
Delay		16.4	
Level of Service		C	
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)		15	

Intersection	
Intersection Delay, s/veh	16.2
Intersection LOS	C

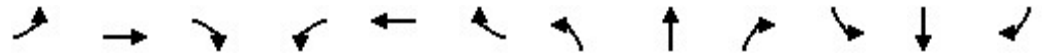
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	65	94	49	9	123	11	120	303	14	2	124	42
Future Vol, veh/h	65	94	49	9	123	11	120	303	14	2	124	42
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	71	102	53	10	134	12	130	329	15	2	135	46
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.7	11.6	21.4	11.2
HCM LOS	B	B	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	27%	31%	6%	1%
Vol Thru, %	69%	45%	86%	74%
Vol Right, %	3%	24%	8%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	437	208	143	168
LT Vol	120	65	9	2
Through Vol	303	94	123	124
RT Vol	14	49	11	42
Lane Flow Rate	475	226	155	183
Geometry Grp	1	1	1	1
Degree of Util (X)	0.72	0.377	0.268	0.292
Departure Headway (Hd)	5.455	6.004	6.204	5.765
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	660	595	574	617
Service Time	3.519	4.088	4.295	3.851
HCM Lane V/C Ratio	0.72	0.38	0.27	0.297
HCM Control Delay	21.4	12.7	11.6	11.2
HCM Lane LOS	C	B	B	B
HCM 95th-tile Q	6.1	1.7	1.1	1.2

Farmington Connectivity Study  
 23: New Britain Ave & Scott Swamp Rd (US 6)

Existing Conditions  
 PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	645	23	17	932	316	22	97	15	147	85	28
Future Volume (vph)	29	645	23	17	932	316	22	97	15	147	85	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	340		0	100		320	190		0	120		0
Storage Lanes	1		0	1		1	1		0	2		0
Taper Length (ft)	150			100			100			110		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.995				0.850		0.980			0.963	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3556	0	1787	3574	1599	1787	1844	0	3467	1812	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1787	3556	0	1787	3574	1599	1787	1844	0	3467	1812	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				340		8			18	
Link Speed (mph)		45			45			25			35	
Link Distance (ft)		3978			920			676			631	
Travel Time (s)		60.3			13.9			18.4			12.3	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	31	694	25	18	1002	340	24	104	16	158	91	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	31	719	0	18	1002	340	24	120	0	158	121	0
Number of Detectors	3	0		3	0	0	3	3		3	3	
Detector Template												
Leading Detector (ft)	24	0		24	0	0	24	24		24	24	
Trailing Detector (ft)	-10	0		-10	0	0	-6	-6		-6	-6	
Detector 1 Position(ft)	-10	0		-10	0	0	-6	-6		-6	-6	
Detector 1 Size(ft)	6	6		6	6	20	6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
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)	6			6			6	6		6	6	
Detector 2 Size(ft)	6			6			6	6		6	6	
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0		0.0	0.0	
Detector 3 Position(ft)	18			18			18	18		18	18	
Detector 3 Size(ft)	6			6			6	6		6	6	
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0		0.0	0.0	
Turn Type	Prot	NA		Prot	NA	pt+ov	Split	NA		Split	NA	
Protected Phases	1	6		5	2	2 7	8	8		7	7	
Permitted Phases												
Detector Phase	1	6		5	2	2	8	8		7	7	
Switch Phase												

Farmington Connectivity Study  
 23: New Britain Ave & Scott Swamp Rd (US 6)

Existing Conditions  
 PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0		7.0	7.0	
Minimum Split (s)	9.9	20.8		11.4	20.8		34.0	34.0		13.2	13.2	
Total Split (s)	15.0	28.0		15.0	28.0		18.0	18.0		19.0	19.0	
Total Split (%)	18.8%	35.0%		18.8%	35.0%		22.5%	22.5%		23.8%	23.8%	
Maximum Green (s)	10.1	22.2		8.6	22.2		12.0	12.0		12.8	12.8	
Yellow Time (s)	3.0	4.8		3.0	4.8		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.9	1.0		3.4	1.0		2.7	2.7		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.9	5.8		6.4	5.8		6.0	6.0		6.2	6.2	
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)							27.0	27.0				
Flash Dont Walk (s)							1.0	1.0				
Pedestrian Calls (#/hr)							0	0				
Act Effct Green (s)	6.1	43.2		5.6	40.9	57.6	9.1	9.1		9.4	9.4	
Actuated g/C Ratio	0.08	0.54		0.07	0.51	0.72	0.11	0.11		0.12	0.12	
v/c Ratio	0.23	0.37		0.14	0.55	0.27	0.12	0.56		0.39	0.53	
Control Delay	38.2	14.3		39.0	15.1	5.5	31.8	40.7		34.9	36.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	38.2	14.3		39.0	15.1	5.5	31.8	40.7		34.9	36.4	
LOS	D	B		D	B	A	C	D		C	D	
Approach Delay		15.3			13.0			39.2			35.6	
Approach LOS		B			B			D			D	
Queue Length 50th (ft)	15	99		9	122	31	11	54		38	49	
Queue Length 95th (ft)	40	224		m15	#380	163	31	102		63	96	
Internal Link Dist (ft)		3898			840			596			551	
Turn Bay Length (ft)	340			100		320	190			120		
Base Capacity (vph)	225	1921		192	1828	1247	268	283		554	305	
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	0.14	0.37		0.09	0.55	0.27	0.09	0.42		0.29	0.40	

Intersection Summary

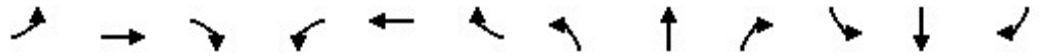
Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 55 (69%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.56  
 Intersection Signal Delay: 17.7 Intersection LOS: B  
 Intersection Capacity Utilization 46.6% ICU Level of Service A  
 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: 23: New Britain Ave & Scott Swamp Rd (US 6)

 Ø1 15 s	 Ø2 (R) 28 s	 Ø7 19 s	 Ø8 18 s
 Ø5 15 s	 Ø6 (R) 28 s		

Farmington Connectivity Study  
 24: Hyde Rd & Scott Swamp Rd (US 6)

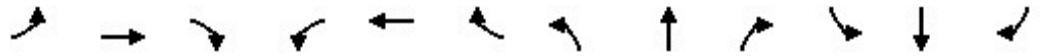
Existing Conditions  
 PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	795	22	115	1218	2	13	0	175	10	5	9
Future Volume (vph)	2	795	22	115	1218	2	13	0	175	10	5	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		0	360		0	0		0	0		0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	100			65			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996							0.850			0.850
Flt Protected	0.950			0.950				0.950			0.967	
Satd. Flow (prot)	1787	3560	0	1787	3574	0	0	1787	1599	0	1819	1599
Flt Permitted	0.950			0.950				0.952			0.804	
Satd. Flow (perm)	1787	3560	0	1787	3574	0	0	1791	1599	0	1512	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5							103			113
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1090			523			762			370	
Travel Time (s)		16.5			7.9			20.8			10.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	2	874	24	126	1338	2	14	0	192	11	5	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	898	0	126	1340	0	0	14	192	0	16	10
Number of Detectors	3	0		3	0		1	3	3	1	3	3
Detector Template							Left			Left		
Leading Detector (ft)	24	0		24	0		20	24	24	20	24	24
Trailing Detector (ft)	-10	0		-10	0		0	-10	-10	0	-10	-10
Detector 1 Position(ft)	-10	0		-10	0		0	-10	-10	0	-10	-10
Detector 1 Size(ft)	6	6		6	6		20	6	6	20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	6			6			6	6	6		6	6
Detector 2 Size(ft)	6			6			6	6	6		6	6
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0	0.0		0.0	0.0
Detector 3 Position(ft)	18			18			18	18	18		18	18
Detector 3 Size(ft)	6			6			6	6	6		6	6
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	NA		Prot	NA		Perm	NA	pm+ov	Perm	NA	Perm
Protected Phases	1	6		5	2			4	5		4	
Permitted Phases							4		4	4		4
Detector Phase	1	6		5	2		4	4	5	4	4	4
Switch Phase												

Farmington Connectivity Study  
 24: Hyde Rd & Scott Swamp Rd (US 6)

Existing Conditions  
 PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0		7.0	7.0	5.0	7.0	7.0	7.0
Minimum Split (s)	10.5	21.8		10.5	21.8		30.5	30.5	10.5	30.5	30.5	30.5
Total Split (s)	15.0	45.0		15.0	45.0		20.0	20.0	15.0	20.0	20.0	20.0
Total Split (%)	18.8%	56.3%		18.8%	56.3%		25.0%	25.0%	18.8%	25.0%	25.0%	25.0%
Maximum Green (s)	9.5	39.2		9.5	39.2		14.5	14.5	9.5	14.5	14.5	14.5
Yellow Time (s)	3.0	4.8		3.0	4.8		3.3	3.3	3.0	3.3	3.3	3.3
All-Red Time (s)	2.5	1.0		2.5	1.0		2.2	2.2	2.5	2.2	2.2	2.2
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)	5.5	5.8		5.5	5.8		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	None
Walk Time (s)		15.0			15.0		24.0	24.0		24.0	24.0	24.0
Flash Dont Walk (s)		1.0			1.0		1.0	1.0		1.0	1.0	1.0
Pedestrian Calls (#/hr)		0			0		0	0		0	0	0
Act Effct Green (s)	5.0	50.9		10.2	66.8			7.0	17.8		7.0	7.0
Actuated g/C Ratio	0.06	0.64		0.13	0.84		0.09	0.22		0.09	0.09	0.09
v/c Ratio	0.02	0.40		0.55	0.45		0.09	0.44		0.12	0.12	0.04
Control Delay	48.5	7.6		41.5	3.3		34.9	14.1		35.9	0.3	0.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	48.5	7.6		41.5	3.3		34.9	14.1		35.9	0.3	0.3
LOS	D	A		D	A		C	B		D	A	A
Approach Delay		7.7			6.6		15.5			22.2		
Approach LOS		A			A		B			C		
Queue Length 50th (ft)	0	165		56	67		7	34		8	0	0
Queue Length 95th (ft)	m3	10		100	177		24	79		26	0	0
Internal Link Dist (ft)		1010			443		682			290		
Turn Bay Length (ft)	130			360								
Base Capacity (vph)	212	2268		248	2986		324	451		274	382	
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		0.51	0.45		0.04	0.43		0.06	0.03	0.03

Intersection Summary

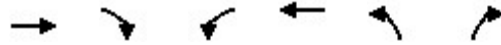
Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 27 (34%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.55  
 Intersection Signal Delay: 7.8 Intersection LOS: A  
 Intersection Capacity Utilization 59.4% ICU Level of Service B  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 24: Hyde Rd & Scott Swamp Rd (US 6)



Farmington Connectivity Study  
 25: Scott Swamp Rd (RT 552) & Scott Swamp Rd (US 6)/Colt Hwy (US 6)

Existing Conditions  
 PM Peak



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↓
Traffic Volume (vph)	707	277	158	1021	274	35
Future Volume (vph)	707	277	158	1021	274	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		350	350		380	0
Storage Lanes		1	1		1	0
Taper Length (ft)			100		130	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	0.95
Frt		0.850			0.983	
Flt Protected			0.950		0.958	
Satd. Flow (prot)	3574	1599	1787	3574	3437	0
Flt Permitted			0.950		0.958	
Satd. Flow (perm)	3574	1599	1787	3574	3437	0
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			45	30	
Link Distance (ft)	1087			600	782	
Travel Time (s)	16.5			9.1	17.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	768	301	172	1110	298	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	768	301	172	1110	336	0
Number of Detectors	0	0	3	0	1	
Detector Template						
Leading Detector (ft)	0	0	24	0	56	
Trailing Detector (ft)	0	0	-10	0	50	
Detector 1 Position(ft)	0	0	-10	0	50	
Detector 1 Size(ft)	6	20	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)			6			
Detector 2 Size(ft)			6			
Detector 2 Type			Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)			0.0			
Detector 3 Position(ft)			18			
Detector 3 Size(ft)			6			
Detector 3 Type			Cl+Ex			
Detector 3 Channel						
Detector 3 Extend (s)			0.0			
Turn Type	NA	pm+ov	Prot	NA	Prot	
Protected Phases	2	3	1	12	3	
Permitted Phases		2				
Detector Phase	2	3	1	2	3	
Switch Phase						

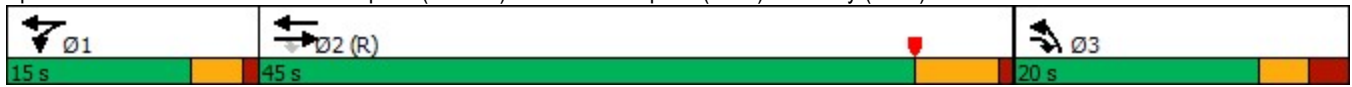


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	15.0	7.0	5.0		7.0	
Minimum Split (s)	21.0	29.5	9.0		29.5	
Total Split (s)	45.0	20.0	15.0		20.0	
Total Split (%)	56.3%	25.0%	18.8%		25.0%	
Maximum Green (s)	39.0	14.5	11.0		14.5	
Yellow Time (s)	5.0	3.0	3.0		3.0	
All-Red Time (s)	1.0	2.5	1.0		2.5	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.0	5.5	4.0		5.5	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	2.0		3.0	
Recall Mode	C-Max	None	Min		None	
Walk Time (s)		23.0			23.0	
Flash Dont Walk (s)		1.0			1.0	
Pedestrian Calls (#/hr)		0			0	
Act Effct Green (s)	42.1	59.8	10.7	58.8	11.7	
Actuated g/C Ratio	0.53	0.75	0.13	0.74	0.15	
v/c Ratio	0.41	0.25	0.72	0.42	0.67	
Control Delay	14.8	3.0	51.2	4.9	38.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	14.8	3.0	51.2	4.9	38.9	
LOS	B	A	D	A	D	
Approach Delay	11.5			11.1	38.9	
Approach LOS	B			B	D	
Queue Length 50th (ft)	86	27	81	90	82	
Queue Length 95th (ft)	196	23	#171	140	120	
Internal Link Dist (ft)	1007			520	702	
Turn Bay Length (ft)		350	350		380	
Base Capacity (vph)	1879	1250	257	2626	622	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.41	0.24	0.67	0.42	0.54	

**Intersection Summary**

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 18 (23%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.72  
 Intersection Signal Delay: 14.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 50.1%  
 ICU Level of Service A  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 25: Scott Swamp Rd (RT 552) & Scott Swamp Rd (US 6)/Colt Hwy (US 6)





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3
Lane Configurations							
Traffic Volume (vph)	163	136	179	318	479	226	
Future Volume (vph)	163	136	179	318	479	226	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor				1.00	0.99		
Frt	0.939				0.957		
Flt Protected	0.973			0.982			
Satd. Flow (prot)	1719	0	0	1847	1785	0	
Flt Permitted	0.973			0.148			
Satd. Flow (perm)	1719	0	0	278	1785	0	
Right Turn on Red		No				Yes	
Satd. Flow (RTOR)					22		
Link Speed (mph)	30			30	30		
Link Distance (ft)	345			413	499		
Travel Time (s)	7.8			9.4	11.3		
Confl. Peds. (#/hr)			4			4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	
Adj. Flow (vph)	168	140	185	328	494	233	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	308	0	0	513	727	0	
Number of Detectors	2		1	1	1		
Detector Template			Left				
Leading Detector (ft)	18		20	206	206		
Trailing Detector (ft)	0		0	200	200		
Detector 1 Position(ft)	0		0	200	200		
Detector 1 Size(ft)	6		20	6	6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		
Detector 2 Position(ft)	12						
Detector 2 Size(ft)	6						
Detector 2 Type	Cl+Ex						
Detector 2 Channel							
Detector 2 Extend (s)	0.0						
Turn Type	Prot		D.P+P	NA	NA		
Protected Phases	4		1	12	2	3	
Permitted Phases			2				
Detector Phase	4		1	1	2		
Switch Phase							
Minimum Initial (s)	5.0		3.0		15.0	1.0	
Minimum Split (s)	9.0		7.0		22.2	25.0	
Total Split (s)	34.0		12.0		39.2	25.0	
Total Split (%)	30.9%		10.9%		35.6%	23%	
Maximum Green (s)	30.0		8.0		32.0	21.0	
Yellow Time (s)	3.0		3.0		4.1	4.0	

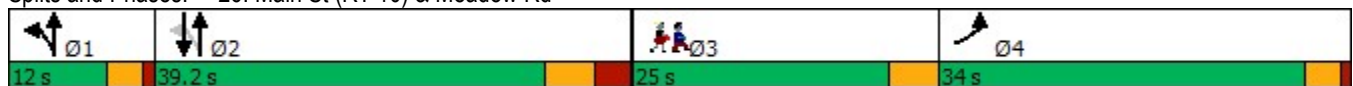


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3
All-Red Time (s)	1.0		1.0		3.1		0.0
Lost Time Adjust (s)	0.0				0.0		
Total Lost Time (s)	4.0				7.2		
Lead/Lag	Lag		Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	3.0		3.0		5.0		3.0
Recall Mode	None		Max		Min		None
Walk Time (s)							7.0
Flash Dont Walk (s)							14.0
Pedestrian Calls (#/hr)							6
Act Effct Green (s)	19.0			44.6	33.0		
Actuated g/C Ratio	0.24			0.56	0.42		
v/c Ratio	0.75			1.61	0.97		
Control Delay	41.4			309.5	51.1		
Queue Delay	0.0			0.0	0.0		
Total Delay	41.4			309.5	51.1		
LOS	D			F	D		
Approach Delay	41.4			309.5	51.1		
Approach LOS	D			F	D		
Queue Length 50th (ft)	128			~269	289		
Queue Length 95th (ft)	292			#743	#907		
Internal Link Dist (ft)	265			333	419		
Turn Bay Length (ft)							
Base Capacity (vph)	669			318	753		
Starvation Cap Reductn	0			0	0		
Spillback Cap Reductn	0			0	0		
Storage Cap Reductn	0			0	0		
Reduced v/c Ratio	0.46			1.61	0.97		

Intersection Summary

Area Type: Other  
 Cycle Length: 110.2  
 Actuated Cycle Length: 79.5  
 Natural Cycle: 150  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 1.61  
 Intersection Signal Delay: 134.8  
 Intersection LOS: F  
 Intersection Capacity Utilization 95.8%  
 ICU Level of Service F  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 26: Main St (RT 10) & Meadow Rd





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	18	25	294	119	26
Future Volume (vph)	13	18	25	294	119	26
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	0.921			0.976		
Flt Protected	0.980			0.996		
Satd. Flow (prot)	1698	0	0	1874	1836	0
Flt Permitted	0.980			0.996		
Satd. Flow (perm)	1698	0	0	1874	1836	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	203			213	257	
Travel Time (s)	4.6			4.8	5.8	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	14	20	27	323	131	29
Shared Lane Traffic (%)						
Lane Group Flow (vph)	34	0	0	350	160	0
Sign Control	Stop			Free	Free	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	38.0%
ICU Level of Service	A
Analysis Period (min)	15



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	18	25	294	119	26
Future Volume (Veh/h)	13	18	25	294	119	26
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	14	20	27	323	131	29
<b>Pedestrians</b>						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	522	146	160			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	522	146	160			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	98	98			
cM capacity (veh/h)	507	904	1425			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	34	350	160			
Volume Left	14	27	0			
Volume Right	20	0	29			
cSH	683	1425	1700			
Volume to Capacity	0.05	0.02	0.09			
Queue Length 95th (ft)	4	1	0			
Control Delay (s)	10.5	0.7	0.0			
Lane LOS	B	A				
Approach Delay (s)	10.5	0.7	0.0			
Approach LOS	B					
<b>Intersection Summary</b>						
Average Delay			1.1			
Intersection Capacity Utilization			38.0%	ICU Level of Service	A	
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	13	18	25	294	119	26
Future Vol, veh/h	13	18	25	294	119	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	14	20	27	323	131	29

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	523	146	160	0	-	0
Stage 1	146	-	-	-	-	-
Stage 2	377	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	516	904	1425	-	-	-
Stage 1	884	-	-	-	-	-
Stage 2	696	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	504	904	1425	-	-	-
Mov Cap-2 Maneuver	504	-	-	-	-	-
Stage 1	864	-	-	-	-	-
Stage 2	696	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1425	-	678	-	-
HCM Lane V/C Ratio	0.019	-	0.05	-	-
HCM Control Delay (s)	7.6	0	10.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	15	36	319	188	24
Future Volume (vph)	13	15	36	319	188	24
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	0.929			0.985		
Flt Protected	0.977			0.995		
Satd. Flow (prot)	1691	0	0	1853	1835	0
Flt Permitted	0.977			0.995		
Satd. Flow (perm)	1691	0	0	1853	1835	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	525			1031	566	
Travel Time (s)	11.9			23.4	12.9	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	16	18	43	384	227	29
Shared Lane Traffic (%)						
Lane Group Flow (vph)	34	0	0	427	256	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	43.5%
ICU Level of Service	A
Analysis Period (min)	15



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	15	36	319	188	24
Future Volume (Veh/h)	13	15	36	319	188	24
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	16	18	43	384	227	29
<b>Pedestrians</b>						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	712	242	256			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	712	242	256			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	98	97			
cM capacity (veh/h)	386	797	1309			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	34	427	256			
Volume Left	16	43	0			
Volume Right	18	0	29			
cSH	531	1309	1700			
Volume to Capacity	0.06	0.03	0.15			
Queue Length 95th (ft)	5	3	0			
Control Delay (s)	12.2	1.1	0.0			
Lane LOS	B	A				
Approach Delay (s)	12.2	1.1	0.0			
Approach LOS	B					
<b>Intersection Summary</b>						
Average Delay			1.2			
Intersection Capacity Utilization			43.5%	ICU Level of Service	A	
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	13	15	36	319	188	24
Future Vol, veh/h	13	15	36	319	188	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	18	43	384	227	29

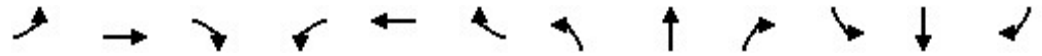
Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	712	242	256	0	0
Stage 1	242	-	-	-	-
Stage 2	470	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	399	797	1309	-	-
Stage 1	798	-	-	-	-
Stage 2	629	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	382	797	1309	-	-
Mov Cap-2 Maneuver	382	-	-	-	-
Stage 1	764	-	-	-	-
Stage 2	629	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.3	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1309	-	530	-	-
HCM Lane V/C Ratio	0.033	-	0.064	-	-
HCM Control Delay (s)	7.8	0	12.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Farmington Connectivity Study  
 29: Whispering Rod Rd/Chaffee Ln & W District Rd

Existing Conditions  
 PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	22	60	3	9	149	18	3	0	4	22	2	25
Future Volume (vph)	22	60	3	9	149	18	3	0	4	22	2	25
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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.996			0.986			0.923				0.931
Flt Protected		0.987			0.997			0.979				0.978
Satd. Flow (prot)	0	1868	0	0	1868	0	0	1717	0	0	1730	0
Flt Permitted		0.987			0.997			0.979				0.978
Satd. Flow (perm)	0	1868	0	0	1868	0	0	1717	0	0	1730	0
Link Speed (mph)		30			30			30				30
Link Distance (ft)		379			364			336				296
Travel Time (s)		8.6			8.3			7.6				6.7
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 (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	24	65	3	10	162	20	3	0	4	24	2	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	92	0	0	192	0	0	7	0	0	53	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	22.5%
ICU Level of Service	A
Analysis Period (min)	15

Farmington Connectivity Study  
 29: Whispering Rod Rd/Chaffee Ln & W District Rd

Existing Conditions  
 PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	22	60	3	9	149	18	3	0	4	22	2	25
Future Volume (vph)	22	60	3	9	149	18	3	0	4	22	2	25
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
Hourly flow rate (vph)	24	65	3	10	162	20	3	0	4	24	2	27
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	92	192	7	53								
Volume Left (vph)	24	10	3	24								
Volume Right (vph)	3	20	4	27								
Hadj (s)	0.03	-0.05	-0.26	-0.22								
Departure Headway (s)	4.3	4.1	4.3	4.3								
Degree Utilization, x	0.11	0.22	0.01	0.06								
Capacity (veh/h)	823	866	771	774								
Control Delay (s)	7.8	8.2	7.4	7.6								
Approach Delay (s)	7.8	8.2	7.4	7.6								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.0									
Level of Service			A									
Intersection Capacity Utilization			22.5%	ICU Level of Service	A							
Analysis Period (min)			15									

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	22	60	3	9	149	18	3	0	4	22	2	25
Future Vol, veh/h	22	60	3	9	149	18	3	0	4	22	2	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	24	65	3	10	162	20	3	0	4	24	2	27
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.8	8.2	7.4	7.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	43%	26%	5%	45%
Vol Thru, %	0%	71%	85%	4%
Vol Right, %	57%	4%	10%	51%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	7	85	176	49
LT Vol	3	22	9	22
Through Vol	0	60	149	2
RT Vol	4	3	18	25
Lane Flow Rate	8	92	191	53
Geometry Grp	1	1	1	1
Degree of Util (X)	0.009	0.107	0.214	0.064
Departure Headway (Hd)	4.316	4.182	4.025	4.305
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	834	847	884	837
Service Time	2.318	2.258	2.084	2.305
HCM Lane V/C Ratio	0.01	0.109	0.216	0.063
HCM Control Delay	7.4	7.8	8.2	7.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0.4	0.8	0.2



# **Appendix D    Background Projects Site-Generated Traffic Volumes**

## **Farmington Area Connectivity Study**

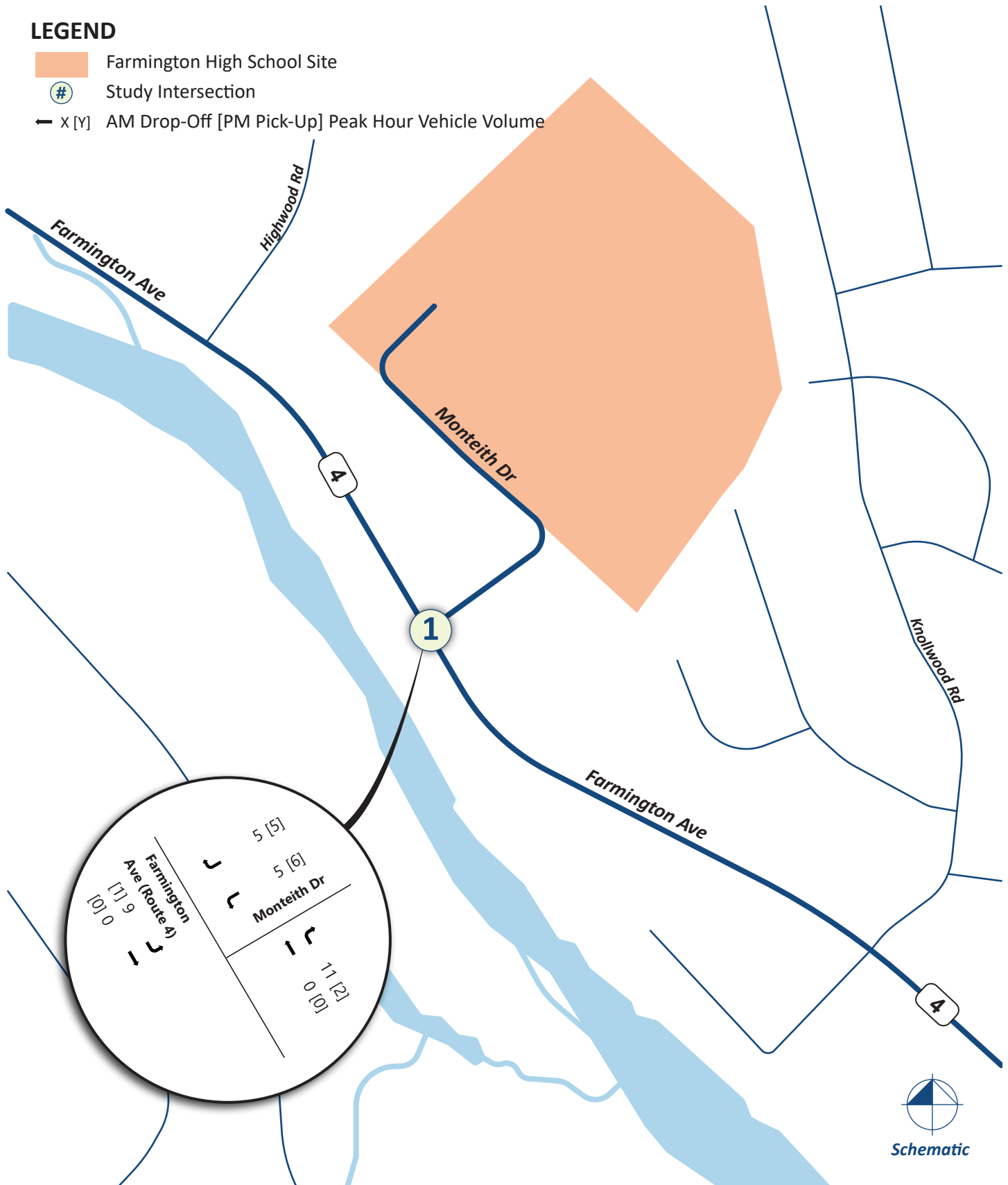
**Capitol Region Council of Governments and Town of Farmington**

SLR Project No.: 141.12020.00019

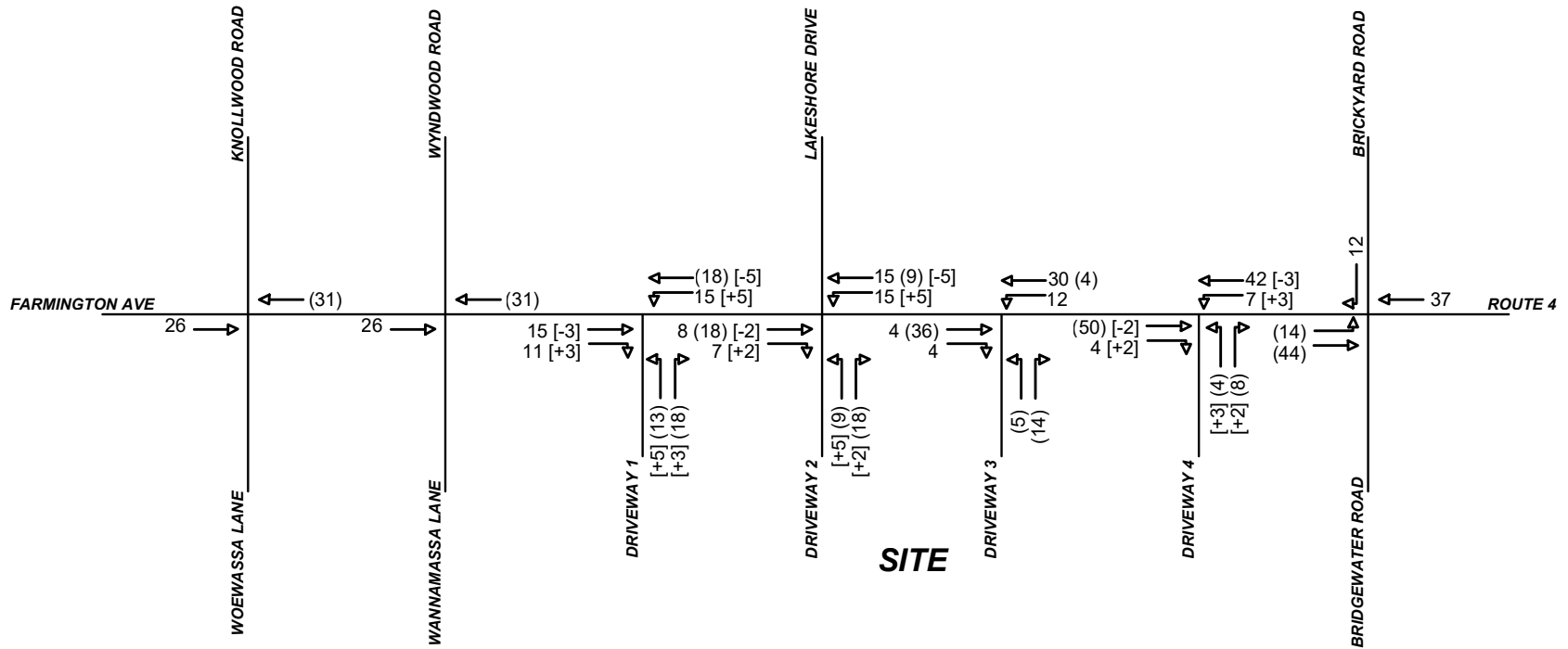
January 16, 2024

**LEGEND**

- Farmington High School Site
- # Study Intersection
- x [y] AM Drop-Off [PM Pick-Up] Peak Hour Vehicle Volume



**Figure 5**  
New Farmington High School Trip Assignment



**LEGEND**  
 XX - Entering Traffic  
 (XX) - Exiting Traffic  
 [XX] - Pass-by Trips

**NEW SITE GENERATED TRAFFIC VOLUMES  
 WEEKDAY MORNING PEAK HOUR**

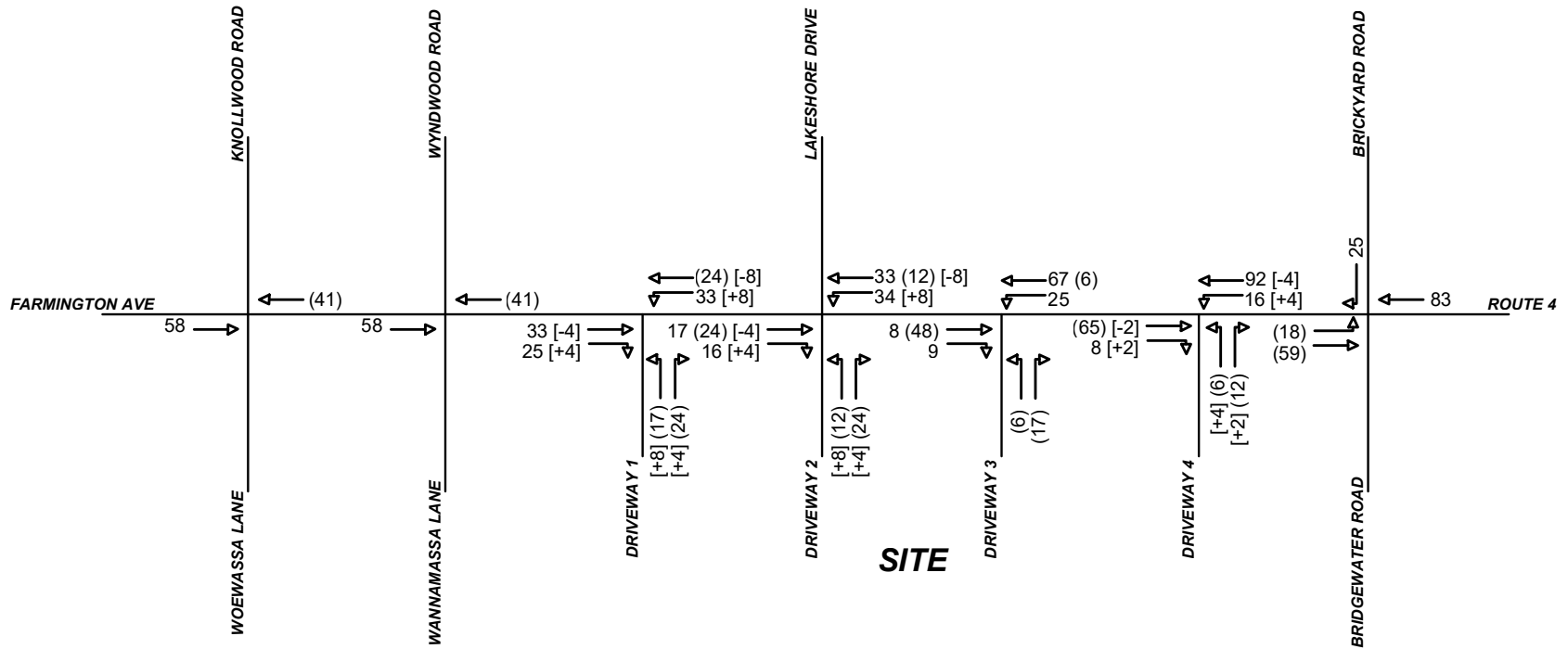
**Midpoint Mixed-Use Development 1349, 1371, 8218, and 8237 Farmington Avenue  
 Farmington, Connecticut**



**FIGURE 6**



SCHEMATIC



**LEGEND**

- XX - Entering Traffic
- (XX) - Exiting Traffic
- [XX] - Pass-by Trips

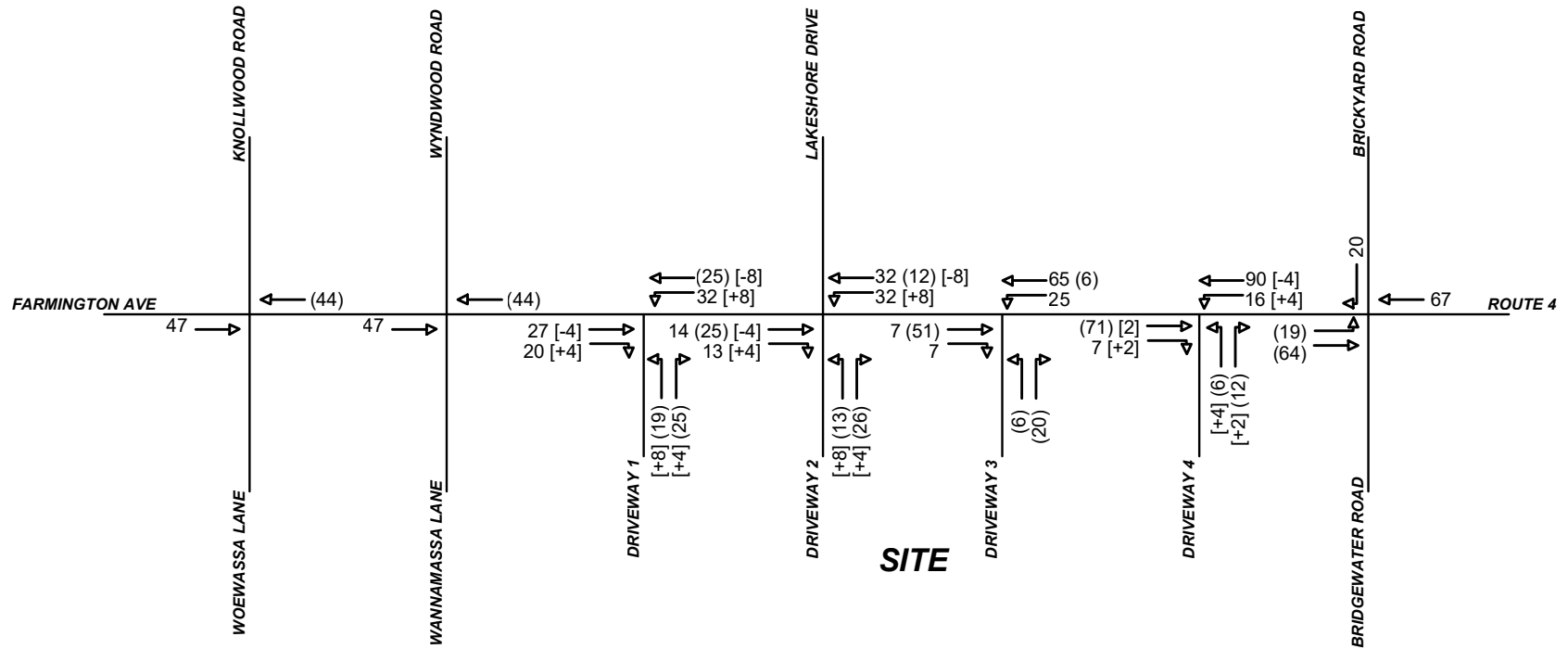
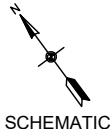
**NEW SITE GENERATED TRAFFIC VOLUMES  
WEEKDAY AFTERNOON PEAK HOUR**

**Midpoint Mixed-Use Development 1349, 1371, 8218, and 8237 Farmington Avenue  
Farmington, Connecticut**



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CHESHIRE, CT 06410  
203.271.1773  
SLRCONSULTING.COM

**FIGURE 7**



**LEGEND**  
 XX - Entering Traffic  
 (XX) - Exiting Traffic  
 [XX] - Pass-by Trips

**NEW SITE GENERATED TRAFFIC VOLUMES  
 SATURDAY MIDDAY PEAK HOUR**

**Midpoint Mixed-Use Development 1349, 1371, 8218, and 8237 Farmington Avenue  
 Farmington, Connecticut**



**FIGURE 8**



# **Appendix E    Future (2050) Conditions Analysis Data**

## **Farmington Area Connectivity Study**

**Capitol Region Council of Governments and Town of Farmington**

SLR Project No.: 141.12020.00019

January 16, 2024

INTERSECTION/LANE GROUP	AVAILABLE STORAGE LENGTH	2050 SCENARIO 1 (NO-BUILD CONDITIONS) QUEUE LENGTH (FEET)			
		A.M. PEAK HOUR		P.M. PEAK HOUR	
		AVERAGE	95TH PERCENTILE	AVERAGE	95TH PERCENTILE
<b>Signalized</b>					
<b>1: Canton Rd (RT 179) &amp; Spielman Hwy (RT 4)</b>					
Eastbound Left	260'	131	212	136	218
Eastbound Right	-	25	98	5	62
Northbound Left/Through	-	81	#243	~879	#1235
Southbound Through/Right	-	151	298	217	#493
<b>3: S Main St (RT 177)/Lovely St (RT 177) &amp; School St/Farmington Ave (RT 4) &amp; Main St (RT 4)</b>					
Eastbound Left/Through/Right	-	33	76	33	73
Westbound Left/Through	-	148	#370	184	#445
Westbound Right	300'	88	225	226	516
Northbound Left	-	60	#152	92	#214
Northbound Through	-	147	299	114	238
Southbound Left	110'	72	#179	71	#195
Southbound Through	-	171	#385	~228	#520
Southeastbound Left	-	278	#642	~373	#737
Southeastbound Right	255'	81	182	76	168
<b>4: Farmington Ave (RT 4) &amp; W Avon Rd (RT 167)</b>					
Eastbound Left	365'	21	123	27	71
Eastbound Through	-	96	501	131	319
Westbound Through/Right	-	125	#504	121	263
Southbound Left/Right	-	35	152	47	151
<b>5: Farmington Ave (RT 4) &amp; Monteith Dr</b>					
Eastbound Left/Through	-	~1314	#1265	175	364
Westbound Through/Right	-	562	622	137	252
Southbound Left	-	145	167	50	92
Southbound Right	-	0	26	0	45
<b>6: Bridgewater Rd/Brickyard Rd &amp; Farmington Ave (RT 4)</b>					
Eastbound Left	90'	15	60	27	94
Eastbound Through/Right	-	397.0	#983	464	#1073
Westbound Left	90'	15	60	14	55
Westbound Through	-	311	#822	386	#971
Westbound Right	90'	0	40	34	149
Northbound Left	-	9	26	34	69
Northbound Through/Right	-	2	35	36	94
Southbound Left	150'	~286	#441	191	#293
Southbound Through/Right	-	20	76	20	82

INTERSECTION/LANE GROUP	AVAILABLE STORAGE LENGTH	2050 SCENARIO 1 (NO-BUILD CONDITIONS) QUEUE LENGTH (FEET)			
		A.M. PEAK HOUR		P.M. PEAK HOUR	
		AVERAGE	95TH PERCENTILE	AVERAGE	95TH PERCENTILE
<b>7: Garden St &amp; Farmington Ave (RT 4)</b>					
Eastbound Through/Right	-	247	570	210	574
Westbound Left	200'	1	m2	1	m1
Westbound Through	-	62	m100	38	m176
Northbound Left/Right	-	195	279	130	198
<b>8: Main St/Waterville Rd (RT 10) &amp; Farmington Ave (RT 4)</b>					
Eastbound Left	100'	6	m4	0	m0
Eastbound Through	-	~665	#854	484	#714
Eastbound Right	150'	94	m92	180	231
Westbound Left	255'	32	m38	49	m96
Westbound Through/Right	-	~978	#1392	~832	#1295
Northbound Left	100'	93	155	176	#311
Norhtbound Through	-	140	215	126	203
Northbound Right	50'	106	167	61	111
Southbound Left/Through/Right	-	357	483	342	#640
<b>9: High St/Backage Rd &amp; Farmington Ave (RT 4)</b>					
Eastbound Left	85'	0	m1	2	m1
Eastbound Through/Right	-	184	m182	436	m216
Westbound Left	115'	2	14	5	34
Westbound Through/Right	-	186	782	191	#982
Northbound Left/Through	-	31	60	72	120
Norhtbound Right	85'	0	70	0	38
Southbound Left/Through/Right	-	6	23	11	33
<b>10: W Avon Rd (RT 167) &amp; Sycamore Hills Rd/Scoville Rd</b>					
Eastbound Left/Through/Right	-	2	16	6	39
Westbound Left/Through/Right	-	47	156	35	146
Northbound Left/Through/Right	-	167	469	170	520
Southbound Left/Through/Right	-	135	#831	98	481
<b>13: Stafford Ave &amp; Stevens St</b>					
Eastbound Left/Through/Right	-	201	#327	113	186
Westbound Left/Through/Right	-	101	184	194	305
Northbound Left/Through/Right	-	144	#245	~357	#543
Southbound Left/Through/Right	-	153	230	131	213

INTERSECTION/LANE GROUP	AVAILABLE STORAGE LENGTH	2050 SCENARIO 1 (NO-BUILD CONDITIONS) QUEUE LENGTH (FEET)			
		A.M. PEAK HOUR		P.M. PEAK HOUR	
		AVERAGE	95TH PERCENTILE	AVERAGE	95TH PERCENTILE
<b>14: S Main St (RT 177) &amp; Mill St</b>					
Eastbound Left/Through	-	32	94	39	82
Eastbound Right	95'	37	67	51	93
Westbound Left/Through	-	53	138	66	124
Westbound Right	100'	6	29	7	24
Northbound Left	60'	12	68	16	37
Northbound Through/Right	-	126	602	169	331
Southbound Left	-	1	13	2	9
Southbound Through/Right	-	211	#725	264	458
<b>15: S Main St (RT 177) &amp; Railroad Ave/New Britain Ave</b>					
Eastbound Left/Through/Right	-	15	81	22	95
Westbound Left/Through	-	7	47	8	47
Westbound Right	200'	47	167	53	157
Northbound Left	80'	2	16	2	16
Northbound Through/Right	-	198	664	262	747
Southbound Left	120'	15	99	34	#200
Southbound Through/Right	-	59	306	80	379
<b>17: Plainville Ave (RT 177) &amp; Coopermine Rd</b>					
Eastbound Left/Through/Right	-	217	#326	135	227
Westbound Left/Through/Right	-	50	94	104	173
Northbound Left/Through/Right	-	347	561	~574	#1079
Southbound Left/Through/Right	-	552	#915	330	#762
<b>18: Plainville Ave (RT 177) &amp; Morea Rd/Meadow Rd</b>					
Eastbound Left/Through/Right	-	~466	#710	179	#318
Westbound Left/Through/Right	-	49	103	216	#395
Northbound Left	250'	27	80	83	163
Northbound Through/Right	-	281	404	681	#1053
Southbound Left	80'	20	37	14	29
Southbound Through/Right	-	576	#918	374	549
<b>19: Plainville Ave (RT 177) &amp; Scott Swamp Rd (US 6)</b>					
Eastbound Left	260'	73	#203	119	240
Eastbound Through	-	~716	#1304	331	#709
Eastbound Right	260'	42	133	9	74
Westbound Left	180'	86	#244	143	#322
Westbound Through/Right	-	104	201	439	#897
Northbound Left	250'	47	121	66	165
Northbound Through	-	~426	#918	~910	#1626
Northbound Right	250'	22	58	14	40
Southbound Left	165'	157	#476	96	#368
Southbound Through/Right	-	368	#784	248	479

INTERSECTION/LANE GROUP	AVAILABLE STORAGE LENGTH	2050 SCENARIO 1 (NO-BUILD CONDITIONS) QUEUE LENGTH (FEET)			
		A.M. PEAK HOUR		P.M. PEAK HOUR	
		AVERAGE	95TH PERCENTILE	AVERAGE	95TH PERCENTILE
<b>20: Unionville Ave (RT 177) &amp; Northwest Dr</b>					
Eastbound Left	-	12	31	10	43
Eastbound Through/Right	-	127	#243	91	#315
Westbound Left	-	11	30	85	238
Westbound Through/Right	-	86	152	187	#529
Northbound Left	210'	64	#208	44	138
Northbound Through/Right	-	172	251	~346	#799
Southbound Left	260'	31	60	26	90
Southbound Through/Right	-	228	#339	164	#436
<b>23: New Britain Ave &amp; Scott Swamp Rd (US 6)</b>					
Eastbound Left	340'	20	49	22	51
Eastbound Through/Right	-	153	290	115	237
Westbound Left	100'	7	24	10	m17
Westbound Through	-	86	187	285	#468
Westbound Right	320'	0	61	33	169
Northbound Left	190'	13	34	14	38
Northbound Through/Right	-	26	59	67	122
Southbound Left	120'	39	61	34	59
Southbound Through/Right	-	58	104	68	125
<b>24: Hyde Rd &amp; Scott Swamp Rd (US 6)</b>					
Eastbound Left	130'	6	m15	1	m4
Eastbound Through/Right	-	24	49	198	245
Westbound Left	360'	87	#155	76	m129
Westbound Through/Right	-	0	121	68	193
Northbound Left/Through	-	5	20	7	24
Northbound Right	-	5	27	67	124
Southbound Left/Through	-	1	9	11	33
Southbound Right	-	0	0	0	0
<b>25: Scott Swamp Rd (RT 552) &amp; Scott Swamp Rd (US 6)/Colt Hwy (US 6)</b>					
Eastbound Through	-	227	54	152	243
Eastbound Right	350'	74	20	15	23
Westbound Left	350'	60	106	90	#191
Westbound Through	-	51	64	111	153
Northbound Left/Right	-	56	86	100	145
<b>26: Main St (RT 10) &amp; Meadow Rd</b>					
Eastbound Left/Right	-	190	#619	132	299
Northbound Left/Through	-	~181	#671	~453	#1000
Southbound Left/Right	-	171	#411	~407	#1057

INTERSECTION/LANE GROUP	AVAILABLE STORAGE LENGTH	2050 SCENARIO 1 (NO-BUILD CONDITIONS) QUEUE LENGTH (FEET)			
		A.M. PEAK HOUR		P.M. PEAK HOUR	
		AVERAGE	95TH PERCENTILE	AVERAGE	95TH PERCENTILE
<i>Unsignalized</i>					
<b>2: River Road &amp; Collinsville Rd (RT 4)</b>					
Northbound Left	-		80		325
Northbound Right	60'		58		30
Westbound Left	-		23		15
<b>11: Harris Rd/W Avon Rd (RT 167) &amp; W Avon Rd (RT 167)</b>					
Eastbound Left/Right	-		50		130
Northbound Left/Through	-		158		73
Southbound Through/Right	-		205		465
<b>12: Burlington Rd &amp; River Rd</b>					
Eastbound Left	-		8		13
Southbound Left/Right	-		23		50
<b>16: S Main St (RT 177) &amp; Webster St</b>					
Northbound Left	-		5		10
Eastbound Left/Right	-		108		110
<b>21: New Britain Ave &amp; Red Oak Hill Rd</b>					
Eastbound Left/Through/Right	-		18		198
Westbound Left/Through/Right	-		80		68
Northbound Left/Through/Right	-		23		213
Southbound Left/Through/Right	-		73		140
<b>22: New Britain Ave &amp; Meadow Rd</b>					
Eastbound Left/Through/Right	-		40		275
Westbound Left/Through/Right	-		100		68
Northbound Left/Through/Right	-		18		30
Southbound Left/Through/Right	-		55		38

INTERSECTION/LANE GROUP	AVAILABLE STORAGE LENGTH	2050 SCENARIO 2 (BUILD CONDITIONS) QUEUE LENGTH (FEET)			
		A.M. PEAK HOUR		P.M. PEAK HOUR	
		AVERAGE	95TH PERCENTILE	AVERAGE	95TH PERCENTILE
<b>Signalized</b>					
<b>1: Canton Rd (RT 179) &amp; Spielman Hwy (RT 4)</b>					
Eastbound Left	260'	128	208	130	211
Eastbound Right	-	21	92	5	61
Northbound Left/Through	-	79	#239	~877	#1231
Southbound Through/Right	-	149	294	212	#481
<b>3: S Main St (RT 177)/Lovely St (RT 177) &amp; School St/Farmington Ave (RT 4) &amp; Main St (RT 4)</b>					
Eastbound Left/Through/Right	-	36	80	37	81
Westbound Left/Through	-	142	#347	157	#386
Westbound Right	300'	126	304	223	521
Northbound Left	-	58	#146	84	#186
Northbound Through	-	138	284	111	234
Southbound Left	110'	76	#192	79	#223
Southbound Through	-	176	#405	~258	#567
Southeastbound Left	-	~382	#781	~411	#798
Southeastbound Right	255'	93	204	78	173
<b>4: Farmington Ave (RT 4) &amp; W Avon Rd (RT 167)</b>					
Eastbound Left	365'	21	106	34	57
Eastbound Through	-	105	446	166	236
Westbound Through/Right	-	183	#685	271	415
Southbound Left/Right	-	86	222	160	#417
<b>5: Farmington Ave (RT 4) &amp; Monteith Dr</b>					
Eastbound Left	200'	82	116	13	30
Eastbound Through/Right	-	439	445	~507	#752
Westbound Left	250'	72	#240	106	#272
Westbound Through	-	197	245	264	400
Westbound Right	100'	84	116	2	14
Northbound Left	250'	86	131	118	#198
Northbound Through	-	95	149	36	73
Northbound Right	75'	0	68	0	71
Southbound Left	-	90	109	32	60
Southbound Through/Right	-	111	181	66	119
<b>6: Bridgewater Rd/Brickyard Rd &amp; Farmington Ave (RT 4)</b>					
Eastbound Left	90'	16	62	28	99
Eastbound Through/Right	-	433.0	#1080	503	#1117
Westbound Left	90'	16	62	16	58
Westbound Through	-	310	#857	426	#1025
Westbound Right	90'	0	47	30	138
Northbound Left	-	11	30	40	79
Northbound Through/Right	-	2	37	41	#111
Southbound Left	150'	~299	#456	185	#284
Southbound Through/Right	-	23	80	22	86

INTERSECTION/LANE GROUP	AVAILABLE STORAGE LENGTH	2050 SCENARIO 2 (BUILD CONDITIONS) QUEUE LENGTH (FEET)			
		A.M. PEAK HOUR		P.M. PEAK HOUR	
		AVERAGE	95TH PERCENTILE	AVERAGE	95TH PERCENTILE
<b>7: Garden St &amp; Farmington Ave (RT 4)</b>					
Eastbound Through/Right	-	223	545	198	547
Westbound Left	200'	1	m1	1	m1
Westbound Through	-	55	m70	37	m198
Northbound Left/Right	-	181	259	127	195
<b>8: Main St/Waterville Rd (RT 10) &amp; Farmington Ave (RT 4)</b>					
Eastbound Left	100'	5	m4	0	m1
Eastbound Through	-	~641	#857	471	#731
Eastbound Right	150'	84	m83	154	206
Westbound Left	255'	31	m38	45	m91
Westbound Through/Right	-	~954	#1393	~802	#1300
Northbound Left	100'	84	139	160	#268
Norhtbound Through	-	124	190	121	194
Northbound Right	50'	109	167	59	108
Southbound Left/Through/Right	-	357	483	338	#629
<b>9: High St/Backage Rd &amp; Farmington Ave (RT 4)</b>					
Eastbound Left	85'	1	m1	2	m1
Eastbound Through/Right	-	119	m202	353	241
Westbound Left	115'	2	13	5	33
Westbound Through/Right	-	194	797	194	#999
Northbound Left/Through	-	33	63	71	118
Norhtbound Right	85'	0	69	0	36
Southbound Left/Through/Right	-	6	23	11	33
<b>10: W Avon Rd (RT 167) &amp; Sycamore Hills Rd/Scoville Rd</b>					
Eastbound Left/Through/Right	-	3	16	6	39
Westbound Left/Through/Right	-	64	156	36	145
Northbound Left/Through/Right	-	228	#668	179	#581
Southbound Left/Through/Right	-	151	#882	116	#619
<b>13: Stafford Ave &amp; Stevens St</b>					
Eastbound Left/Through/Right	-	217	#364	121	198
Westbound Left/Through/Right	-	119	#213	208	#362
Northbound Left/Through/Right	-	151	#259	~371	#558
Southbound Left/Through/Right	-	150	226	130	211

INTERSECTION/LANE GROUP	AVAILABLE STORAGE LENGTH	2050 SCENARIO 2 (BUILD CONDITIONS) QUEUE LENGTH (FEET)			
		A.M. PEAK HOUR		P.M. PEAK HOUR	
		AVERAGE	95TH PERCENTILE	AVERAGE	95TH PERCENTILE
<b>14: S Main St (RT 177) &amp; Mill St</b>					
Eastbound Left/Through	-	32	93	43	91
Eastbound Right	95'	37	68	32	65
Westbound Left/Through	-	52	136	86	#170
Westbound Right	100'	6	28	13	37
Northbound Left	60'	11	69	13	27
Northbound Through/Right	-	83	403	61	96
Southbound Left	-	1	10	8	24
Southbound Through/Right	-	111	376	73	128
<b>15: S Main St (RT 177) &amp; Railroad Ave/New Britain Ave</b>					
Eastbound Left/Through/Right	-	15	77	13	62
Westbound Left/Through	-	3	25	21	#98
Westbound Right	200'	5	26	16	51
Northbound Left	80'	3	20	2	19
Northbound Through/Right	-	146	523	130	434
Southbound Left	120'	8	54	3	22
Southbound Through/Right	-	64	350	81	385
<b>17: Plainville Ave (RT 177) &amp; Coopermine Rd</b>					
Eastbound Left/Through/Right	-	215	#325	146	242
Westbound Left/Through/Right	-	62	111	112	184
Northbound Left/Through/Right	-	361	586	~689	#1103
Southbound Left/Through/Right	-	551	#913	357	#786
<b>18: Plainville Ave (RT 177) &amp; Morea Rd/Meadow Rd</b>					
Eastbound Left/Through/Right	-	~533	#784	198	#355
Westbound Left/Through/Right	-	63	126	256	#484
Northbound Left	250'	29	89	106	#265
Northbound Through/Right	-	296	421	~834	#1129
Southbound Left	80'	22	41	17	39
Southbound Through/Right	-	641	#1001	412	573
<b>19: Plainville Ave (RT 177) &amp; Scott Swamp Rd (US 6)</b>					
Eastbound Left	260'	78	#221	124	249
Eastbound Through	-	~715	#1302	323	#697
Eastbound Right	260'	44	138	4	64
Westbound Left	180'	90	#256	138	#299
Westbound Through/Right	-	107	206	448	#912
Northbound Left	250'	47	120	63	158
Northbound Through	-	~477	#965	~932	#1646
Northbound Right	250'	23	59	13	38
Southbound Left	165'	158	#478	114	#421
Southbound Through/Right	-	386	#822	267	#538

INTERSECTION/LANE GROUP	AVAILABLE STORAGE LENGTH	2050 SCENARIO 2 (BUILD CONDITIONS) QUEUE LENGTH (FEET)			
		A.M. PEAK HOUR		P.M. PEAK HOUR	
		AVERAGE	95TH PERCENTILE	AVERAGE	95TH PERCENTILE
<b>20: Unionville Ave (RT 177) &amp; Northwest Dr</b>					
Eastbound Left	-	14	33	10	43
Eastbound Through/Right	-	135	#262	95	#326
Westbound Left	-	11	30	84	234
Westbound Through/Right	-	86	153	193	#545
Northbound Left	210'	63	#205	43	138
Northbound Through/Right	-	173	251	~354	#808
Southbound Left	260'	31	60	28	98
Southbound Through/Right	-	242	#361	167	#448
<b>23: New Britain Ave &amp; Scott Swamp Rd (US 6)</b>					
Eastbound Left	340'	23	53	22	52
Eastbound Through/Right	-	155	280	118	238
Westbound Left	100'	6	22	12	m21
Westbound Through	-	87	183	289	#467
Westbound Right	320'	0	57	32	159
Northbound Left	190'	21	48	15	40
Northbound Through/Right	-	40	80	69	125
Southbound Left	120'	38	59	29	53
Southbound Through/Right	-	59	105	79	141
<b>24: Hyde Rd &amp; Scott Swamp Rd (US 6)</b>					
Eastbound Left	130'	6	m14	1	m3
Eastbound Through/Right	-	24	50	198	191
Westbound Left	360'	84	#140	80	m136
Westbound Through/Right	-	0	116	67	187
Northbound Left/Through	-	5	18	7	24
Northbound Right	-	3	26	66	125
Southbound Left/Through	-	1	9	11	33
Southbound Right	-	0	0	0	0
<b>25: Scott Swamp Rd (RT 552) &amp; Scott Swamp Rd (US 6)/Colt Hwy (US 6)</b>					
Eastbound Through	-	221	54	156	243
Eastbound Right	350'	71	20	15	19
Westbound Left	350'	60	105	89	#189
Westbound Through	-	51	63	106	149
Northbound Left/Right	-	55	85	97	141
<b>26: Main St (RT 10) &amp; Meadow Rd</b>					
Eastbound Left/Right	-	175	#594	133	301
Northbound Left/Through	-	160	#627	~417	#941
Southbound Left/Right	-	161	#368	335	#995
<b>30: New Britain Ave &amp; Monteith Dr</b>					
Eastbound Left	200'	14	30	7	19
Eastbound Through	-	34	61	4	12
Westbound Through	-	3	11	28	87
Westbound Right	100'	0	51	0	53
Southbound Left	200'	108	#430	56	#276
Southbound Right	-	0	20	0	24

INTERSECTION/LANE GROUP	AVAILABLE STORAGE LENGTH	2050 SCENARIO 2 (BUILD CONDITIONS) QUEUE LENGTH (FEET)			
		A.M. PEAK HOUR		P.M. PEAK HOUR	
		AVERAGE	95TH PERCENTILE	AVERAGE	95TH PERCENTILE
<b>Unsignalized</b>					
<b>2: River Road &amp; Collinsville Rd (RT 4)</b>					
Northbound Left	-		53		283
Northbound Right	60'		28		18
Westbound Left	-		15		10
<b>11: Harris Rd/W Avon Rd (RT 167) &amp; W Avon Rd (RT 167)</b>					
Eastbound Left/Right	-		60		133
Northbound Left/Through	-		228		88
Southbound Through/Right	-		260		580
<b>12: Burlington Rd &amp; River Rd</b>					
Eastbound Left	-		8		13
Southbound Left/Right	-		20		53
<b>16: S Main St (RT 177) &amp; Webster St</b>					
Northbound Left	-		3		8
Eastbound Left/Right	-		115		135
<b>21: New Britain Ave &amp; Red Oak Hill Rd</b>					
Eastbound Left/Through/Right	-		30		353
Westbound Left/Through/Right	-		95		75
Northbound Left/Through/Right	-		25		270
Southbound Left/Through/Right	-		88		258
<b>22: New Britain Ave &amp; Meadow Rd</b>					
Eastbound Left/Through/Right	-		48		333
Westbound Left/Through/Right	-		163		108
Northbound Left/Through/Right	-		18		33
Southbound Left/Through/Right	-		73		60

Notes: LOS calculations were performed using Synchro 11.

Farmington Connectivity Study  
 1: Canton Rd (RT 179) & Spielman Hwy (RT 4)

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	223	395	171	166	269	138
Future Volume (vph)	223	395	171	166	269	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98				
Frt		0.850			0.954	
Flt Protected	0.950			0.975		
Satd. Flow (prot)	1770	1583	0	1816	1777	0
Flt Permitted	0.950			0.629		
Satd. Flow (perm)	1770	1547	0	1172	1777	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		411			41	
Link Speed (mph)	35			50	50	
Link Distance (ft)	986			565	665	
Travel Time (s)	19.2			7.7	9.1	
Confl. Peds. (#/hr)		1				
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	232	411	178	173	280	144
Shared Lane Traffic (%)						
Lane Group Flow (vph)	232	411	0	351	424	0
Number of Detectors	1	1	1	1	1	
Detector Template			Left			
Leading Detector (ft)	40	40	20	40	40	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	40	40	20	40	40	
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	pm+ov	D.P+P	NA	NA	
Protected Phases	4	1	1	12	2	
Permitted Phases		4	2			
Detector Phase	4	1	1	2	2	
Switch Phase						
Minimum Initial (s)	6.0	6.0	6.0		20.0	
Minimum Split (s)	17.0	10.0	10.0		26.6	
Total Split (s)	29.0	10.0	10.0		46.6	
Total Split (%)	33.9%	11.7%	11.7%		54.4%	
Maximum Green (s)	25.0	6.0	6.0		40.0	
Yellow Time (s)	3.0	3.0	3.0		5.0	
All-Red Time (s)	1.0	1.0	1.0		1.6	
Lost Time Adjust (s)	0.0	0.0			0.0	
Total Lost Time (s)	4.0	4.0			6.6	

Farmington Connectivity Study  
 1: Canton Rd (RT 179) & Spielman Hwy (RT 4)

Existing Conditions  
 AM PEAK



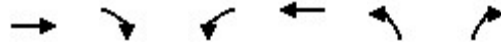
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	1.0	3.0	3.0		5.0	
Recall Mode	None	Min	Min		Min	
Walk Time (s)	12.0					
Flash Dont Walk (s)	1.0					
Pedestrian Calls (#/hr)	1					
Act Effct Green (s)	11.1	17.3		32.6	23.8	
Actuated g/C Ratio	0.20	0.31		0.58	0.42	
v/c Ratio	0.66	0.54		0.47	0.55	
Control Delay	31.0	4.6		7.8	14.4	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	31.0	4.6		7.8	14.4	
LOS	C	A		A	B	
Approach Delay	14.1			7.8	14.4	
Approach LOS	B			A	B	
Queue Length 50th (ft)	66	0		38	86	
Queue Length 95th (ft)	155	51		105	194	
Internal Link Dist (ft)	906			485	585	
Turn Bay Length (ft)	260					
Base Capacity (vph)	810	765		1064	1312	
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	0.29	0.54		0.33	0.32	

Intersection Summary

Area Type:	Other
Cycle Length:	85.6
Actuated Cycle Length:	56.1
Natural Cycle:	55
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.66
Intersection Signal Delay:	12.7
Intersection LOS:	B
Intersection Capacity Utilization:	65.3%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 1: Canton Rd (RT 179) & Spielman Hwy (RT 4)

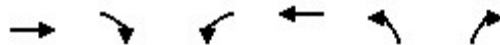




Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	485	77	68	286	51	91
Future Volume (vph)	485	77	68	286	51	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	60
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.982					0.850
Flt Protected				0.991	0.950	
Satd. Flow (prot)	1811	0	0	1828	1752	1568
Flt Permitted				0.991	0.950	
Satd. Flow (perm)	1811	0	0	1828	1752	1568
Link Speed (mph)	30			30	25	
Link Distance (ft)	740			816	860	
Travel Time (s)	16.8			18.5	23.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	500	79	70	295	53	94
Shared Lane Traffic (%)						
Lane Group Flow (vph)	579	0	0	365	53	94
Sign Control	Free			Free	Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	62.3%
ICU Level of Service	B
Analysis Period (min)	15



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↩			↩	↩	↩
Traffic Volume (veh/h)	485	77	68	286	51	91
Future Volume (Veh/h)	485	77	68	286	51	91
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	500	79	70	295	53	94
<b>Pedestrians</b>						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type	None		None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			579		974	540
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			579		974	540
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		79	83
cM capacity (veh/h)			990		258	540
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>NB 1</b>			
Volume Total	579	365	147			
Volume Left	0	70	53			
Volume Right	79	0	94			
cSH	1700	990	716			
Volume to Capacity	0.34	0.07	0.21			
Queue Length 95th (ft)	0	6	19			
Control Delay (s)	0.0	2.3	16.5			
Lane LOS			A		C	
Approach Delay (s)	0.0	2.3	16.5			
Approach LOS			C			
<b>Intersection Summary</b>						
Average Delay			3.0			
Intersection Capacity Utilization			62.3%	ICU Level of Service		B
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	2.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	485	77	68	286	51	91
Future Vol, veh/h	485	77	68	286	51	91
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	60
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	500	79	70	295	53	94

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	579	0	975 540
Stage 1	-	-	-	-	540 -
Stage 2	-	-	-	-	435 -
Critical Hdwy	-	-	4.13	-	6.43 6.23
Critical Hdwy Stg 1	-	-	-	-	5.43 -
Critical Hdwy Stg 2	-	-	-	-	5.43 -
Follow-up Hdwy	-	-	2.227	-	3.527 3.327
Pot Cap-1 Maneuver	-	-	990	-	278 540
Stage 1	-	-	-	-	582 -
Stage 2	-	-	-	-	650 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	990	-	254 540
Mov Cap-2 Maneuver	-	-	-	-	254 -
Stage 1	-	-	-	-	582 -
Stage 2	-	-	-	-	595 -

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	16.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	254	540	-	-	990	-
HCM Lane V/C Ratio	0.207	0.174	-	-	0.071	-
HCM Control Delay (s)	22.8	13.1	-	-	8.9	0
HCM Lane LOS	C	B	-	-	A	A
HCM 95th %tile Q(veh)	0.8	0.6	-	-	0.2	-

Farmington Connectivity Study

Existing Conditions

3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



Lane Group	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↑↑			↑	↑			↑	↑	↑	↑	↑
Traffic Volume (vph)	50	22	163	32	217	40	9	122	242	263	87	226
Future Volume (vph)	50	22	163	32	217	40	9	122	242	263	87	226
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		50	0		0			0		145	110	
Storage Lanes		1	0		1			1		1	1	
Taper Length (ft)			25					25			50	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95
Ped Bike Factor	1.00			1.00				1.00				1.00
Frt	0.955				0.850					0.850		0.999
Flt Protected				0.960				0.950			0.950	
Satd. Flow (prot)	3363	0	0	1788	1583	0	0	1770	1863	1583	1770	1768
Flt Permitted				0.706				0.356			0.600	
Satd. Flow (perm)	3363	0	0	1311	1583	0	0	663	1863	1583	1118	1768
Right Turn on Red		No				No				Yes		
Satd. Flow (RTOR)										215		
Link Speed (mph)	25			30					25			35
Link Distance (ft)	761			292					461			785
Travel Time (s)	20.8			6.6					12.6			15.3
Confl. Peds. (#/hr)		3	3					1				
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	53	23	173	34	231	43	10	130	257	280	93	240
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	0	0	207	274	0	0	140	257	280	93	242
Number of Detectors	1		1	1	1		1	1	0	0	1	1
Detector Template			Left				Left					
Leading Detector (ft)	44		20	44	44		20	44	0	0	44	206
Trailing Detector (ft)	-6		0	-6	-6		0	-6	0	0	-6	200
Detector 1 Position(ft)	-6		0	-6	-6		0	-6	0	0	-6	200
Detector 1 Size(ft)	50		20	50	50		20	50	6	20	50	6
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	NA		Perm	NA	pt+ov		D.P+P	D.P+P	NA	Free	Perm	NA
Protected Phases	4			4	4 5		1	1	1 2			2
Permitted Phases			4				2	2		Free		2
Detector Phase	4		4	4	4		1	1	2		2	2
Switch Phase												
Minimum Initial (s)	9.0		9.0	9.0			5.0	5.0			15.0	15.0
Minimum Split (s)	14.0		14.0	14.0			9.0	9.0			21.0	21.0
Total Split (s)	31.0		31.0	31.0			11.0	11.0			28.0	28.0
Total Split (%)	25.0%		25.0%	25.0%			8.9%	8.9%			22.6%	22.6%
Maximum Green (s)	26.0		26.0	26.0			7.0	7.0			22.0	22.0
Yellow Time (s)	4.0		4.0	4.0			3.0	3.0			4.0	4.0
All-Red Time (s)	1.0		1.0	1.0			1.0	1.0			2.0	2.0
Lost Time Adjust (s)	0.0			0.0				0.0			0.0	0.0
Total Lost Time (s)	5.0			5.0				4.0			6.0	6.0

3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



Lane Group	SBR	SBR2	SEL2	SEL	SER	SER2	Ø3
Lane Configurations							
Traffic Volume (vph)	2	3	5	396	167	2	
Future Volume (vph)	2	3	5	396	167	2	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	60			0	255		
Storage Lanes	1			1	1		
Taper Length (ft)				25			
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	
Ped Bike Factor							
Frt		0.850			0.850		
Flt Protected				0.950			
Satd. Flow (prot)	0	1504	0	1770	1583	0	
Flt Permitted				0.996			
Satd. Flow (perm)	0	1504	0	1855	1583	0	
Right Turn on Red		Yes				No	
Satd. Flow (RTOR)		185					
Link Speed (mph)				30			
Link Distance (ft)				820			
Travel Time (s)				18.6			
Confl. Peds. (#/hr)	1				3	1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	2	3	5	421	178	2	
Shared Lane Traffic (%)		10%					
Lane Group Flow (vph)	0	3	0	426	180	0	
Number of Detectors		0	1	1	1		
Detector Template			Left				
Leading Detector (ft)		0	20	44	44		
Trailing Detector (ft)		0	0	-6	-6		
Detector 1 Position(ft)		0	0	-6	-6		
Detector 1 Size(ft)		20	20	50	50		
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		
Turn Type		Free	D,Pm	Prot	Prot		
Protected Phases				5	5	3	
Permitted Phases		Free	5				
Detector Phase			5	5	5		
Switch Phase							
Minimum Initial (s)			9.0	9.0	9.0	1.0	
Minimum Split (s)			14.0	14.0	14.0	23.0	
Total Split (s)			31.0	31.0	31.0	23.0	
Total Split (%)			25.0%	25.0%	25.0%	19%	
Maximum Green (s)			26.0	26.0	26.0	19.0	
Yellow Time (s)			4.0	4.0	4.0	4.0	
All-Red Time (s)			1.0	1.0	1.0	0.0	
Lost Time Adjust (s)				0.0	0.0		
Total Lost Time (s)				5.0	5.0		

Farmington Connectivity Study

Existing Conditions

3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)

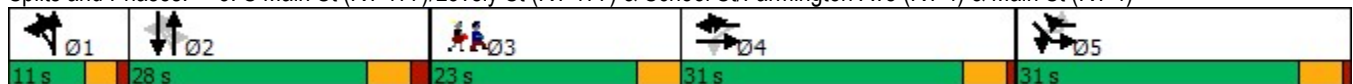


Lane Group	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL	SBT
Lead/Lag	Lag		Lag	Lag			Lead	Lead			Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes			Yes	Yes			Yes	Yes
Vehicle Extension (s)	1.5		1.5	1.5			1.5	1.5			2.5	2.5
Recall Mode	None		None	None			None	None			Min	Min
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	18.7			18.7	50.5			26.4	30.5	93.7	17.3	17.3
Actuated g/C Ratio	0.20			0.20	0.54			0.28	0.33	1.00	0.18	0.18
v/c Ratio	0.11			0.79	0.32			0.52	0.42	0.18	0.45	0.74
Control Delay	32.9			58.9	15.1			35.0	29.8	0.2	45.3	53.1
Queue Delay	0.0			0.0	0.0			0.0	0.0	0.0	0.0	0.0
Total Delay	32.9			58.9	15.1			35.0	29.8	0.2	45.3	53.1
LOS	C			E	B			C	C	A	D	D
Approach Delay	32.9			33.9					18.6			50.5
Approach LOS	C			C					B			D
Queue Length 50th (ft)	17			107	73			56	110	0	47	135
Queue Length 95th (ft)	48			#274	211			146	256	0	125	#325
Internal Link Dist (ft)	681			212					381			705
Turn Bay Length (ft)										145	110	
Base Capacity (vph)	956			372	846			272	709	1583	269	425
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	0.08			0.56	0.32			0.51	0.36	0.18	0.35	0.57

Intersection Summary

Area Type: Other  
 Cycle Length: 124  
 Actuated Cycle Length: 93.7  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.81  
 Intersection Signal Delay: 34.3      Intersection LOS: C  
 Intersection Capacity Utilization 81.5%      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: 3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



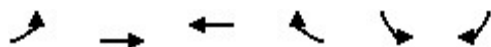
3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



Lane Group	SBR	SBR2	SEL2	SEL	SER	SER2	Ø3
Lead/Lag							Lead
Lead-Lag Optimize?							Yes
Vehicle Extension (s)			1.5	1.5	1.5		3.0
Recall Mode			None	None	None		None
Walk Time (s)							7.0
Flash Dont Walk (s)							12.0
Pedestrian Calls (#/hr)							4
Act Effct Green (s)		93.7		26.7	26.7		
Actuated g/C Ratio		1.00		0.28	0.28		
v/c Ratio		0.00		0.81	0.40		
Control Delay		0.0		47.2	34.4		
Queue Delay		0.0		0.0	0.0		
Total Delay		0.0		47.2	34.4		
LOS		A		D	C		
Approach Delay				43.4			
Approach LOS				D			
Queue Length 50th (ft)		0		214	79		
Queue Length 95th (ft)		0		#589	207		
Internal Link Dist (ft)				740			
Turn Bay Length (ft)		60			255		
Base Capacity (vph)		1504		527	450		
Starvation Cap Reductn		0		0	0		
Spillback Cap Reductn		0		0	0		
Storage Cap Reductn		0		0	0		
Reduced v/c Ratio		0.00		0.81	0.40		
<b>Intersection Summary</b>							

Farmington Connectivity Study  
 4: Farmington Ave (RT 4) & W Avon Rd (RT 167)

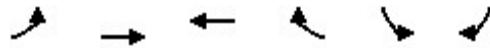
Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3
Lane Configurations							
Traffic Volume (vph)	197	627	374	35	49	138	
Future Volume (vph)	197	627	374	35	49	138	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	365			0	0	0	
Storage Lanes	1			0	1	0	
Taper Length (ft)	50				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor					1.00		
Frt			0.988		0.901		
Flt Protected	0.950				0.987		
Satd. Flow (prot)	1770	1863	1840	0	1657	0	
Flt Permitted	0.381				0.987		
Satd. Flow (perm)	710	1863	1840	0	1653	0	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			4		111		
Link Speed (mph)		30	35		30		
Link Distance (ft)		1079	965		1192		
Travel Time (s)		24.5	18.8		27.1		
Confl. Peds. (#/hr)					3		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	
Adj. Flow (vph)	203	646	386	36	51	142	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	203	646	422	0	193	0	
Number of Detectors	1	2	2		1		
Detector Template							
Leading Detector (ft)	24	246	246		24		
Trailing Detector (ft)	-6	120	120		-6		
Detector 1 Position(ft)	-6	120	120		-6		
Detector 1 Size(ft)	30	6	6		30		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		
Detector 2 Position(ft)		240	240				
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.P+P	NA	NA		Prot		
Protected Phases	1	1 2	2		4	3	
Permitted Phases	2						
Detector Phase	1	2	2		4		
Switch Phase							
Minimum Initial (s)	5.0		15.0		7.0	1.0	
Minimum Split (s)	9.5		22.5		22.5	23.0	
Total Split (s)	19.0		44.5		28.0	23.0	
Total Split (%)	16.6%		38.9%		24.5%	20%	

Farmington Connectivity Study  
 4: Farmington Ave (RT 4) & W Avon Rd (RT 167)

Existing Conditions  
 AM PEAK

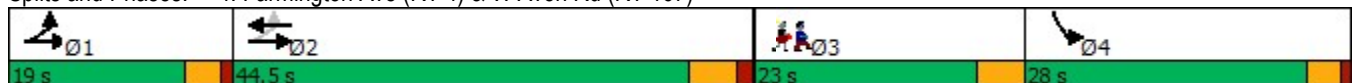


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3
Maximum Green (s)	15.0		39.0		24.0		19.0
Yellow Time (s)	3.0		4.0		3.0		4.0
All-Red Time (s)	1.0		1.5		1.0		0.0
Lost Time Adjust (s)	0.0		0.0		0.0		
Total Lost Time (s)	4.0		5.5		4.0		
Lead/Lag	Lead		Lag		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	1.5		2.5		2.0		3.0
Recall Mode	None		Min		None		None
Walk Time (s)							7.0
Flash Dont Walk (s)							11.0
Pedestrian Calls (#/hr)							9
Act Effct Green (s)	32.0	36.5	22.5		9.9		
Actuated g/C Ratio	0.55	0.63	0.39		0.17		
v/c Ratio	0.38	0.55	0.59		0.51		
Control Delay	8.6	10.1	19.8		18.8		
Queue Delay	0.0	0.0	0.0		0.0		
Total Delay	8.6	10.1	19.8		18.8		
LOS	A	B	B		B		
Approach Delay		9.7	19.8		18.8		
Approach LOS		A	B		B		
Queue Length 50th (ft)	16	68	82		20		
Queue Length 95th (ft)	105	400	333		122		
Internal Link Dist (ft)		999	885		1112		
Turn Bay Length (ft)	365						
Base Capacity (vph)	754	1667	1402		835		
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	0.27	0.39	0.30		0.23		

Intersection Summary

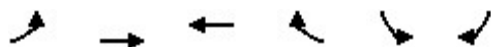
Area Type: Other  
 Cycle Length: 114.5  
 Actuated Cycle Length: 57.9  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.59  
 Intersection Signal Delay: 13.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 55.2%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 4: Farmington Ave (RT 4) & W Avon Rd (RT 167)



Farmington Connectivity Study  
5: Farmington Ave (RT 4) & Monteith Dr

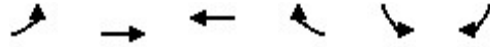
Existing Conditions  
AM PEAK



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø2	Ø3
Lane Configurations								
Traffic Volume (vph)	303	435	293	446	175	144		
Future Volume (vph)	303	435	293	446	175	144		
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			0.919			0.850		
Flt Protected		0.980			0.950			
Satd. Flow (prot)	0	1825	1712	0	1770	1583		
Flt Permitted		0.310			0.950			
Satd. Flow (perm)	0	577	1712	0	1770	1583		
Right Turn on Red				Yes		Yes		
Satd. Flow (RTOR)			121			195		
Link Speed (mph)		35	35		25			
Link Distance (ft)		784	925		548			
Travel Time (s)		15.3	18.0		14.9			
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74		
Adj. Flow (vph)	409	588	396	603	236	195		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	997	999	0	236	195		
Number of Detectors	1	0	1		3	3		
Detector Template	Left							
Leading Detector (ft)	20	0	356		24	24		
Trailing Detector (ft)	0	0	350		-6	-6		
Detector 1 Position(ft)	0	0	350		-6	-6		
Detector 1 Size(ft)	20	6	6		6	6		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)					6	6		
Detector 2 Size(ft)					6	6		
Detector 2 Type					Cl+Ex	Cl+Ex		
Detector 2 Channel								
Detector 2 Extend (s)					0.0	0.0		
Detector 3 Position(ft)					18	18		
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	D.P+P	NA	NA		Prot	Perm		
Protected Phases	1	1 2 3	2 3		4		2	3
Permitted Phases	2 3					4		
Detector Phase	1	2	2		4	4		
Switch Phase								
Minimum Initial (s)	5.0				7.0	7.0	15.0	1.0
Minimum Split (s)	9.0				16.0	16.0	20.4	7.5
Total Split (s)	10.0				30.0	30.0	71.0	9.0
Total Split (%)	8.3%				25.0%	25.0%	59%	8%

Farmington Connectivity Study  
 5: Farmington Ave (RT 4) & Monteith Dr

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø2	Ø3
Maximum Green (s)	6.0				26.0	26.0	65.6	2.5
Yellow Time (s)	3.0				3.0	3.0	4.4	4.4
All-Red Time (s)	1.0				1.0	1.0	1.0	2.1
Lost Time Adjust (s)					0.0	0.0		
Total Lost Time (s)					4.0	4.0		
Lead/Lag	Lead				Lag		Lag	Lead
Lead-Lag Optimize?	Yes				Yes		Yes	Yes
Vehicle Extension (s)	3.0				1.5		3.0	3.0
Recall Mode	None				None		C-Max	None
Walk Time (s)					11.0			
Flash Dont Walk (s)					1.0			
Pedestrian Calls (#/hr)					3			
Act Effct Green (s)	92.1		90.7		19.9		19.9	
Actuated g/C Ratio	0.77		0.76		0.17		0.17	
v/c Ratio	2.26		0.76		0.81		0.46	
Control Delay	589.3		12.9		67.9		9.1	
Queue Delay	0.0		0.0		0.0		0.0	
Total Delay	589.3		12.9		67.9		9.1	
LOS	F		B		E		A	
Approach Delay	589.3		12.9		41.3			
Approach LOS	F		B		D			
Queue Length 50th (ft)	~913		332		178		0	
Queue Length 95th (ft)	#889		382		198		27	
Internal Link Dist (ft)	704		845		468			
Turn Bay Length (ft)								
Base Capacity (vph)	442		1323		386		497	
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	2.26		0.76		0.61		0.39	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 16 (13%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.26  
 Intersection Signal Delay: 254.7  
 Intersection LOS: F  
 Intersection Capacity Utilization 103.3%  
 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.

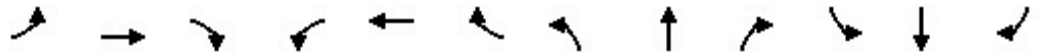
Splits and Phases: 5: Farmington Ave (RT 4) & Monteith Dr



Lanes, Volumes, Timings  
 SLR

Farmington Connectivity Study  
 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)

Existing Conditions  
 AM PEAK

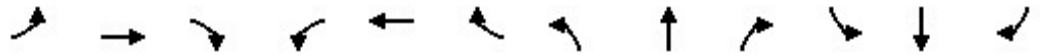


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	558	6	29	499	174	6	1	18	351	9	36
Future Volume (vph)	29	558	6	29	499	174	6	1	18	351	9	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90		0	90		90	0		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	65			110			25			50		
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								0.97		1.00		
Fr <sub>t</sub>		0.998				0.850		0.857				0.880
Fl <sub>t</sub> Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1719	1806	0	1719	1810	1538	1719	1502	0	1719	1592	0
Fl <sub>t</sub> Permitted	0.288			0.227			0.724			0.744		
Satd. Flow (perm)	521	1806	0	411	1810	1538	1310	1502	0	1341	1592	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				175		20				40
Link Speed (mph)		40			40			30				35
Link Distance (ft)		635			779			428				768
Travel Time (s)		10.8			13.3			9.7				15.0
Confl. Peds. (#/hr)									2	2		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	32	613	7	32	548	191	7	1	20	386	10	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	620	0	32	548	191	7	21	0	386	50	0
Number of Detectors	1	2		1	2	0	1	1		1	1	
Detector Template												
Leading Detector (ft)	45	342		45	342	0	55	50		50	60	
Trailing Detector (ft)	-5	190		-5	190	0	-5	-10		-10	-10	
Detector 1 Position(ft)	-5	190		-5	190	0	-5	-10		-10	-10	
Detector 1 Size(ft)	50	6		50	6	20	60	60		60	70	
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)		336			336							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	8		7	8	
Permitted Phases	6			2		2	8			8		
Detector Phase	1	6		5	2	2	7	8		7	8	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	5.0	7.0		5.0	7.0	
Minimum Split (s)	10.4	22.0		10.4	22.0	22.0	11.0	14.0		11.0	14.0	
Total Split (s)	15.0	48.0		15.0	48.0	48.0	27.0	16.0		27.0	16.0	

Lane Group	Ø9
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)	
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	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	14.0
Total Split (s)	14.0

Farmington Connectivity Study  
 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)

Existing Conditions  
 AM PEAK

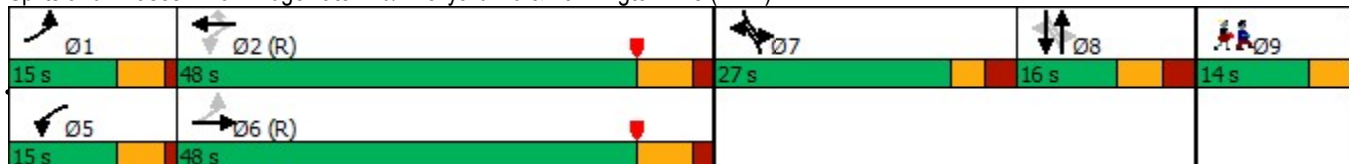


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	12.5%	40.0%		12.5%	40.0%	40.0%	22.5%	13.3%		22.5%	13.3%	
Maximum Green (s)	9.6	41.0		9.6	41.0	41.0	21.1	9.0		21.1	9.0	
Yellow Time (s)	4.4	5.0		4.4	5.0	5.0	3.0	4.1		3.0	4.1	
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	2.9	2.9		2.9	2.9	
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)	5.4	7.0		5.4	7.0	7.0	5.9	7.0		5.9	7.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	68.3	63.0		68.3	63.0	63.0	29.7	7.4		29.7	7.4	
Actuated g/C Ratio	0.57	0.52		0.57	0.52	0.52	0.25	0.06		0.25	0.06	
v/c Ratio	0.09	0.65		0.11	0.58	0.21	0.02	0.19		0.96	0.37	
Control Delay	13.2	28.0		13.5	25.8	4.9	29.8	25.6		76.5	29.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	13.2	28.0		13.5	25.8	4.9	29.8	25.6		76.5	29.1	
LOS	B	C		B	C	A	C	C		E	C	
Approach Delay		27.3			20.1			26.7			71.1	
Approach LOS		C			C			C			E	
Queue Length 50th (ft)	9	346		9	288	6	4	1		273	8	
Queue Length 95th (ft)	31	#702		31	#575	58	15	27		#390	48	
Internal Link Dist (ft)		555			699			348			688	
Turn Bay Length (ft)	90			90		90				150		
Base Capacity (vph)	401	948		345	949	890	401	131		403	156	
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	0.08	0.65		0.09	0.58	0.21	0.02	0.16		0.96	0.32	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.96  
 Intersection Signal Delay: 34.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 67.5%  
 ICU Level of Service C  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

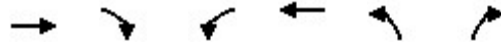
Splits and Phases: 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)



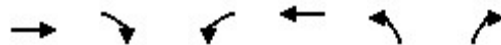
Lane Group	Ø9
Total Split (%)	12%
Maximum Green (s)	10.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	16.0
Pedestrian Calls (#/hr)	2
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	

Farmington Connectivity Study  
 7: Garden St & Farmington Ave (RT 4)

Existing Conditions  
 AM PEAK



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø4
Lane Configurations	↑↑		↵	↑	↵↵			
Traffic Volume (vph)	1041	91	13	622	129	35		
Future Volume (vph)	1041	91	13	622	129	35		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)		0	200		0	0		
Storage Lanes		0	1		1	0		
Taper Length (ft)			50		25			
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00		
Ped Bike Factor	1.00		1.00		0.98			
Frt	0.988				0.971			
Flt Protected			0.950		0.962			
Satd. Flow (prot)	3490	0	1770	1863	1740	0		
Flt Permitted			0.200		0.962			
Satd. Flow (perm)	3490	0	372	1863	1700	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)	10				8			
Link Speed (mph)	30			30	30			
Link Distance (ft)	1042			566	488			
Travel Time (s)	23.7			12.9	11.1			
Confl. Peds. (#/hr)		5	5		8			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Adj. Flow (vph)	1096	96	14	655	136	37		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	1192	0	14	655	173	0		
Number of Detectors	0		0	0	3			
Detector Template								
Leading Detector (ft)	0		0	0	24			
Trailing Detector (ft)	0		0	0	-6			
Detector 1 Position(ft)	0		0	0	-6			
Detector 1 Size(ft)	6		20	6	6			
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel								
Detector 1 Extend (s)	0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0		0.0	0.0	0.0			
Detector 2 Position(ft)					6			
Detector 2 Size(ft)					6			
Detector 2 Type					Cl+Ex			
Detector 2 Channel								
Detector 2 Extend (s)					0.0			
Detector 3 Position(ft)					18			
Detector 3 Size(ft)					6			
Detector 3 Type					Cl+Ex			
Detector 3 Channel								
Detector 3 Extend (s)					0.0			
Turn Type	NA		Perm	NA	Prot			
Protected Phases	2 4			2	5		3	4
Permitted Phases			2					
Detector Phase	2		2	2	5			

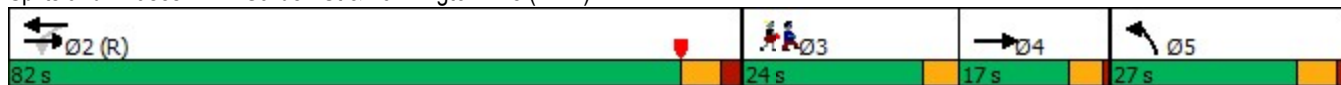


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø4
<b>Switch Phase</b>								
Minimum Initial (s)			15.0	15.0	7.0		7.0	6.0
Minimum Split (s)			22.1	22.1	13.3		24.0	10.8
Total Split (s)			82.0	82.0	27.0		24.0	17.0
Total Split (%)			54.7%	54.7%	18.0%		16%	11%
Maximum Green (s)			74.9	74.9	20.7		20.0	12.2
Yellow Time (s)			4.6	4.6	4.5		4.0	3.8
All-Red Time (s)			2.5	2.5	1.8		0.0	1.0
Lost Time Adjust (s)			0.0	0.0	0.0			
Total Lost Time (s)			7.1	7.1	6.3			
<b>Lead/Lag</b>							Lead	Lag
Lead-Lag Optimize?							Yes	Yes
Vehicle Extension (s)			3.0	3.0	1.5		3.0	1.5
Recall Mode			C-Max	C-Max	None		None	None
Walk Time (s)							7.0	
Flash Dont Walk (s)							13.0	
Pedestrian Calls (#/hr)							13	
Act Effct Green (s)	108.6		108.6	108.6	18.4			
Actuated g/C Ratio	0.72		0.72	0.72	0.12			
v/c Ratio	0.47		0.05	0.49	0.78			
Control Delay	11.9		2.5	2.6	83.8			
Queue Delay	0.0		0.0	0.7	0.0			
Total Delay	11.9		2.5	3.2	83.8			
LOS	B		A	A	F			
Approach Delay	11.9			3.2	83.8			
Approach LOS	B			A	F			
Queue Length 50th (ft)	170		0	17	159			
Queue Length 95th (ft)	437		m2	m140	234			
Internal Link Dist (ft)	962			486	408			
Turn Bay Length (ft)			200					
Base Capacity (vph)	2528		269	1348	259			
Starvation Cap Reductn	0		0	351	0			
Spillback Cap Reductn	156		0	0	0			
Storage Cap Reductn	0		0	0	0			
Reduced v/c Ratio	0.50		0.05	0.66	0.67			

**Intersection Summary**

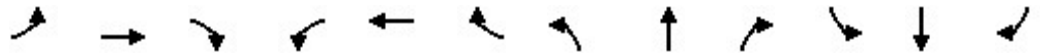
Area Type:	Other
Cycle Length:	150
Actuated Cycle Length:	150
Offset:	40 (27%), Referenced to phase 2:EBWB, Start of Yellow
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.78
Intersection Signal Delay:	15.2
Intersection LOS:	B
Intersection Capacity Utilization:	53.2%
ICU Level of Service:	A
Analysis Period (min):	15
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 7: Garden St & Farmington Ave (RT 4)



Farmington Connectivity Study  
 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4)

Existing Conditions  
 AM PEAK

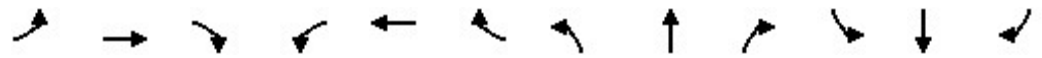


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	1019	107	48	496	206	97	141	134	212	102	16
Future Volume (vph)	9	1019	107	48	496	206	97	141	134	212	102	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	255		0	100		50	0		0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (ft)	65			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.956				0.850		0.994	
Flt Protected	0.950			0.950			0.950				0.969	
Satd. Flow (prot)	1770	3539	1583	1770	1781	0	1770	1863	1583	0	1794	0
Flt Permitted	0.087			0.108			0.950				0.969	
Satd. Flow (perm)	162	3539	1583	201	1781	0	1770	1863	1583	0	1794	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		566			848			677			693	
Travel Time (s)		12.9			19.3			15.4			15.8	
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)	10	1108	116	52	539	224	105	153	146	230	111	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	1108	116	52	763	0	105	153	146	0	358	0
Number of Detectors	3	3	4	1	1		3	3	2	1	2	
Detector Template										Left		
Leading Detector (ft)	30	30	36	34	34		30	30	48	20	48	
Trailing Detector (ft)	0	0	-6	0	0		0	0	0	0	-6	
Detector 1 Position(ft)	0	0	-6	0	0		0	0	0	0	-6	
Detector 1 Size(ft)	6	6	6	34	34		6	6	12	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	12	12	6				12	12	18		6	
Detector 2 Size(ft)	6	6	6				6	6	30		42	
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0	0.0				0.0	0.0	0.0		0.0	
Detector 3 Position(ft)	24	24	18				24	24				
Detector 3 Size(ft)	6	6	6				6	6				
Detector 3 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex				
Detector 3 Channel												
Detector 3 Extend (s)	0.0	0.0	0.0				0.0	0.0				
Detector 4 Position(ft)			30									
Detector 4 Size(ft)			6									
Detector 4 Type			Cl+Ex									
Detector 4 Channel												
Detector 4 Extend (s)			0.0									
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Split	NA	pt+ov	Split	NA	

Lane Group	Ø3
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)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Detector 4 Position(ft)	
Detector 4 Size(ft)	
Detector 4 Type	
Detector 4 Channel	
Detector 4 Extend (s)	
Turn Type	

Farmington Connectivity Study  
 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4)

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	1	6		5	2		7	7	5 7	4	4	
Permitted Phases	6		6	2								
Detector Phase	1	6	6	5	2		7	7	7	4	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	7.0	20.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	9.5	27.3	27.3	12.0	27.3		13.0	13.0		22.5	22.5	
Total Split (s)	15.0	54.0	54.0	15.0	54.0		23.0	23.0		34.0	34.0	
Total Split (%)	10.0%	36.0%	36.0%	10.0%	36.0%		15.3%	15.3%		22.7%	22.7%	
Maximum Green (s)	11.0	46.7	46.7	10.0	46.7		17.0	17.0		28.3	28.3	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	2.8	2.8	2.0	2.8		3.0	3.0		2.7	2.7	
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	7.3	7.3	5.0	7.3		6.0	6.0				5.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag					Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None		None	None	
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										5.0	5.0	
Pedestrian Calls (#/hr)										0	0	
Act Effct Green (s)	71.2	63.9	63.9	75.6	70.2		17.0	17.0	28.0			40.1
Actuated g/C Ratio	0.47	0.43	0.43	0.50	0.47		0.11	0.11	0.19			0.27
v/c Ratio	0.08	0.74	0.17	0.29	0.92		0.52	0.73	0.49			0.75
Control Delay	14.7	31.5	20.7	22.0	52.0		71.1	82.8	58.6			61.1
Queue Delay	0.0	0.5	0.0	0.0	0.0		0.0	0.0	0.0			0.0
Total Delay	14.7	32.0	20.7	22.0	52.0		71.1	82.8	58.6			61.1
LOS	B	C	C	C	D		E	F	E			E
Approach Delay		30.8			50.1			71.0				61.1
Approach LOS		C			D			E				E
Queue Length 50th (ft)	3	484	72	27	671		98	147	127			326
Queue Length 95th (ft)	m6	#646	m57	m24	#1126		157	218	187			438
Internal Link Dist (ft)		486			768			597				613
Turn Bay Length (ft)	100		150	255			100		50			
Base Capacity (vph)	199	1507	673	206	833		221	233	302			479
Starvation Cap Reductn	0	117	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	0.05	0.80	0.17	0.25	0.92		0.48	0.66	0.48			0.75

**Intersection Summary**

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 20 (13%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 46.0

Intersection Capacity Utilization 81.2%

Intersection LOS: D

ICU Level of Service D

Lane Group	Ø3
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	25.0
Total Split (s)	24.0
Total Split (%)	16%
Maximum Green (s)	20.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	13.0
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	
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	
<b>Intersection Summary</b>	








Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

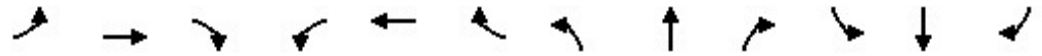
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4)

 Ø1	 Ø2 (R)	 Ø3	 Ø4	 Ø7
15 s	54 s	24 s	34 s	23 s
 Ø5	 Ø6 (R)			
15 s	54 s			

Farmington Connectivity Study  
 9: High St/Backage Rd & Farmington Ave (RT 4)

Existing Conditions  
 AM PEAK

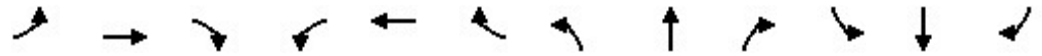


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	1311	27	25	777	6	28	1	180	3	0	2
Future Volume (vph)	6	1311	27	25	777	6	28	1	180	3	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	85		100	115		0	0		85	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	70			115			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.999				0.850		0.946	
Flt Protected	0.950			0.950				0.954			0.971	
Satd. Flow (prot)	1752	3494	0	1752	1843	0	0	1760	1568	0	1694	0
Flt Permitted	0.281			0.145								
Satd. Flow (perm)	518	3494	0	267	1843	0	0	1845	1568	0	1745	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		2							200			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		848			473			291			375	
Travel Time (s)		19.3			10.8			6.6			8.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	7	1457	30	28	863	7	31	1	200	3	0	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	1487	0	28	870	0	0	32	200	0	5	0
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template							Left			Left		
Leading Detector (ft)	40	40		25	25		20	35	35	20	30	
Trailing Detector (ft)	0	0		-10	-10		0	0	0	0	0	
Detector 1 Position(ft)	0	0		-10	-10		0	0	0	0	0	
Detector 1 Size(ft)	40	40		35	35		20	35	35	20	30	
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	pm+pt	NA		pm+pt	NA		D.P+P	NA	Prot	Perm	NA	
Protected Phases	1	6		5	2		4	4 7	4 7		7	
Permitted Phases	6			2			7			7		
Detector Phase	1	6		5	2		4	4	4	7	7	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		7.0			7.0	7.0	
Minimum Split (s)	9.0	21.7		9.0	21.7		11.7			12.0	12.0	
Total Split (s)	13.0	83.0		13.0	83.0		14.0			16.0	16.0	
Total Split (%)	8.7%	55.3%		8.7%	55.3%		9.3%			10.7%	10.7%	
Maximum Green (s)	9.0	76.3		9.0	76.3		9.3			11.0	11.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0			3.0	3.0	
All-Red Time (s)	1.0	2.2		1.0	2.2		1.7			2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	
Total Lost Time (s)	4.0	6.7		4.0	6.7						5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lag					

Lane Group	Ø3
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)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	24.0
Total Split (s)	24.0
Total Split (%)	16%
Maximum Green (s)	20.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead

Farmington Connectivity Study  
 9: High St/Backage Rd & Farmington Ave (RT 4)

Existing Conditions  
 AM PEAK

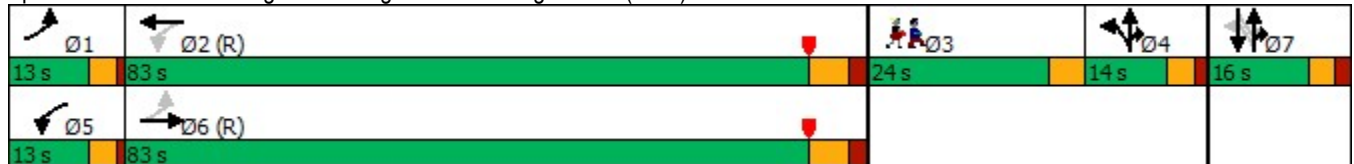


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes					
Vehicle Extension (s)	1.5	2.0		1.5	2.0		2.0			2.0	2.0	
Recall Mode	None	C-Min		None	C-Min		None			None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	128.0	122.3		129.7	126.0			10.8	10.8			7.0
Actuated g/C Ratio	0.85	0.82		0.86	0.84			0.07	0.07			0.05
v/c Ratio	0.01	0.52		0.10	0.56			0.24	0.67			0.06
Control Delay	1.8	8.6		2.9	7.0			67.0	18.9			70.2
Queue Delay	0.0	0.1		0.0	0.0			0.0	0.0			0.0
Total Delay	1.8	8.8		2.9	7.0			67.0	18.9			70.2
LOS	A	A		A	A			E	B			E
Approach Delay		8.7			6.9			25.5				70.3
Approach LOS		A			A			C				E
Queue Length 50th (ft)	1	323		2	144			31	0			5
Queue Length 95th (ft)	m0	173		13	590			60	74			20
Internal Link Dist (ft)		768			393			211				295
Turn Bay Length (ft)	85			115					85			
Base Capacity (vph)	524	2848		321	1547			152	312			127
Starvation Cap Reductn	0	405		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	0.01	0.61		0.09	0.56			0.21	0.64			0.04

Intersection Summary

Area Type: Other  
 Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 45 (30%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.67  
 Intersection Signal Delay: 9.7  
 Intersection LOS: A  
 Intersection Capacity Utilization 67.7%  
 ICU Level of Service C  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

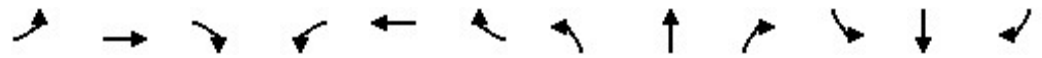
Splits and Phases: 9: High St/Backage Rd & Farmington Ave (RT 4)



Lane Group	Ø3
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	13.0
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	
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	
<b>Intersection Summary</b>	

Farmington Connectivity Study  
 10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd

Existing Conditions  
 AM PEAK

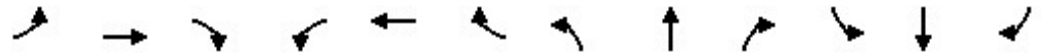


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	4	1	0	52	2	43	2	412	111	108	399	2
Future Volume (vph)	4	1	0	52	2	43	2	412	111	108	399	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00			1.00			1.00	
Frt					0.940			0.971				
Flt Protected		0.960			0.974						0.989	
Satd. Flow (prot)	0	1705	0	0	1626	0	0	1724	0	0	1756	0
Flt Permitted		0.832			0.830			0.998			0.777	
Satd. Flow (perm)	0	1477	0	0	1384	0	0	1721	0	0	1380	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					32			14				
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		360			802			2590			707	
Travel Time (s)		8.2			18.2			44.1			12.1	
Confl. Peds. (#/hr)			1	1			1					1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Adj. Flow (vph)	5	1	0	61	2	51	2	485	131	127	469	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	6	0	0	114	0	0	618	0	0	598	0
Number of Detectors	1	1		1	1		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	22		20	22		20	206		20	206	
Trailing Detector (ft)	0	-10		0	-10		0	100		0	100	
Detector 1 Position(ft)	0	-10		0	-10		0	100		0	100	
Detector 1 Size(ft)	20	32		20	32		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)								200			200	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		D.P+P	NA	
Protected Phases		4			4			2		1	12	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		1	1	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0		5.0		
Minimum Split (s)	12.0	12.0		12.0	12.0		21.6	21.6		9.0		
Total Split (s)	30.0	30.0		30.0	30.0		51.6	51.6		12.0		
Total Split (%)	26.0%	26.0%		26.0%	26.0%		44.6%	44.6%		10.4%		
Maximum Green (s)	25.0	25.0		25.0	25.0		45.0	45.0		8.0		
Yellow Time (s)	3.3	3.3		3.3	3.3		4.2	4.2		3.0		

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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)	
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	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	22.0
Total Split (s)	22.0
Total Split (%)	19%
Maximum Green (s)	18.0
Yellow Time (s)	4.0

Farmington Connectivity Study  
 10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	1.7	1.7		1.7	1.7		2.4	2.4		1.0		
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.0			5.0			6.6				
Lead/Lag	Lag	Lag		Lag	Lag		Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes		
Vehicle Extension (s)	1.5	1.5		1.5	1.5		2.5	2.5		3.0		
Recall Mode	None	None		None	None		Min	Min		None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		10.1			10.1			29.9				41.9
Actuated g/C Ratio		0.16			0.16			0.46				0.64
v/c Ratio		0.03			0.47			0.77				0.64
Control Delay		32.0			30.9			24.9				13.3
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		32.0			30.9			24.9				13.3
LOS		C			C			C				B
Approach Delay		32.0			30.9			24.9				13.3
Approach LOS		C			C			C				B
Queue Length 50th (ft)		2			28			171				74
Queue Length 95th (ft)		15			101			478				339
Internal Link Dist (ft)		280			722			2510				627
Turn Bay Length (ft)												
Base Capacity (vph)		639			617			1268				940
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			0.18			0.49				0.64

Intersection Summary

Area Type:	Other
Cycle Length:	115.6
Actuated Cycle Length:	65
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.77
Intersection Signal Delay:	20.2
Intersection LOS:	C
Intersection Capacity Utilization:	74.5%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd



Lane Group	Ø3
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	5
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	

Farmington Connectivity Study  
 11: Harris Rd/W Avon Rd (RT 167) & W Avon Rd (RT167)

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	282	66	32	207	270	101
Future Volume (vph)	282	66	32	207	270	101
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	0.974				0.963	
Flt Protected	0.961			0.993		
Satd. Flow (prot)	1744	0	0	1850	1794	0
Flt Permitted	0.961			0.993		
Satd. Flow (perm)	1744	0	0	1850	1794	0
Link Speed (mph)	40			30	40	
Link Distance (ft)	781			809	2590	
Travel Time (s)	13.3			18.4	44.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	303	71	34	223	290	109
Shared Lane Traffic (%)						
Lane Group Flow (vph)	374	0	0	257	399	0
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	62.7%
ICU Level of Service	B
Analysis Period (min)	15

Farmington Connectivity Study  
 11: Harris Rd/W Avon Rd (RT 167) & W Avon Rd (RT167)

Existing Conditions  
 AM PEAK



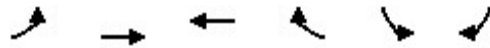
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	282	66	32	207	270	101
Future Volume (vph)	282	66	32	207	270	101
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	303	71	34	223	290	109
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total (vph)	374	257	399			
Volume Left (vph)	303	34	0			
Volume Right (vph)	71	0	109			
Hadj (s)	0.08	0.06	-0.13			
Departure Headway (s)	5.8	5.8	5.4			
Degree Utilization, x	0.60	0.41	0.60			
Capacity (veh/h)	594	578	640			
Control Delay (s)	16.9	12.8	16.0			
Approach Delay (s)	16.9	12.8	16.0			
Approach LOS	C	B	C			
Intersection Summary						
Delay			15.5			
Level of Service			C			
Intersection Capacity Utilization			62.7%	ICU Level of Service	B	
Analysis Period (min)			15			

Intersection	
Intersection Delay, s/veh	15.5
Intersection LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			W	W	
Traffic Vol, veh/h	282	66	32	207	270	101
Future Vol, veh/h	282	66	32	207	270	101
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	303	71	34	223	290	109
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	16.9	12.7	15.9
HCM LOS	C	B	C

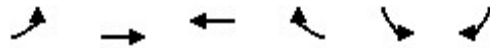
Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	13%	81%	0%
Vol Thru, %	87%	0%	73%
Vol Right, %	0%	19%	27%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	239	348	371
LT Vol	32	282	0
Through Vol	207	0	270
RT Vol	0	66	101
Lane Flow Rate	257	374	399
Geometry Grp	1	1	1
Degree of Util (X)	0.408	0.595	0.591
Departure Headway (Hd)	5.721	5.723	5.336
Convergence, Y/N	Yes	Yes	Yes
Cap	627	629	674
Service Time	3.777	3.77	3.385
HCM Lane V/C Ratio	0.41	0.595	0.592
HCM Control Delay	12.7	16.9	15.9
HCM Lane LOS	B	C	C
HCM 95th-tile Q	2	3.9	3.9



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	77	184	36	12	25	69
Future Volume (vph)	77	184	36	12	25	69
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			0.967		0.901	
Flt Protected		0.985			0.987	
Satd. Flow (prot)	0	1800	1767	0	1625	0
Flt Permitted		0.985			0.987	
Satd. Flow (perm)	0	1800	1767	0	1625	0
Link Speed (mph)		30	30		25	
Link Distance (ft)		546	304		789	
Travel Time (s)		12.4	6.9		21.5	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	92	219	43	14	30	82
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	311	57	0	112	0
Sign Control		Free	Free		Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	32.9%
ICU Level of Service	A
Analysis Period (min)	15



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	77	184	36	12	25	69
Future Volume (Veh/h)	77	184	36	12	25	69
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	92	219	43	14	30	82
<b>Pedestrians</b>						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	57				453	50
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	57				453	50
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	94				94	92
cM capacity (veh/h)	1535				527	1013
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>SB 1</b>			
Volume Total	311	57	112			
Volume Left	92	0	30			
Volume Right	0	14	82			
cSH	1535	1700	812			
Volume to Capacity	0.06	0.03	0.14			
Queue Length 95th (ft)	5	0	12			
Control Delay (s)	2.6	0.0	10.1			
Lane LOS	A		B			
Approach Delay (s)	2.6	0.0	10.1			
Approach LOS			B			
<b>Intersection Summary</b>						
Average Delay			4.0			
Intersection Capacity Utilization			32.9%	ICU Level of Service	A	
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	3.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	77	184	36	12	25	69
Future Vol, veh/h	77	184	36	12	25	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	92	219	43	14	30	82

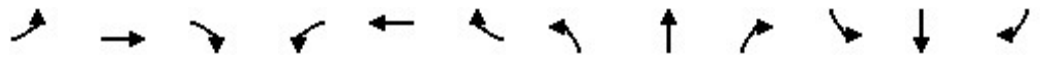
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	57	0	-	0	453 50
Stage 1	-	-	-	-	50 -
Stage 2	-	-	-	-	403 -
Critical Hdwy	4.14	-	-	-	6.44 6.24
Critical Hdwy Stg 1	-	-	-	-	5.44 -
Critical Hdwy Stg 2	-	-	-	-	5.44 -
Follow-up Hdwy	2.236	-	-	-	3.536 3.336
Pot Cap-1 Maneuver	1535	-	-	-	561 1013
Stage 1	-	-	-	-	967 -
Stage 2	-	-	-	-	671 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1535	-	-	-	523 1013
Mov Cap-2 Maneuver	-	-	-	-	523 -
Stage 1	-	-	-	-	901 -
Stage 2	-	-	-	-	671 -

Approach	EB	WB	SB
HCM Control Delay, s	2.2	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1535	-	-	-	811
HCM Lane V/C Ratio	0.06	-	-	-	0.138
HCM Control Delay (s)	7.5	0	-	-	10.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.5

Farmington Connectivity Study  
13: Stafford Ave & Stevens St

Existing Conditions  
AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	29	260	92	65	93	17	50	128	55	46	188	33
Future Volume (vph)	29	260	92	65	93	17	50	128	55	46	188	33
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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00			0.99			1.00	
Frt		0.967			0.987			0.968			0.983	
Flt Protected		0.996			0.982			0.989			0.991	
Satd. Flow (prot)	0	1781	0	0	1805	0	0	1774	0	0	1815	0
Flt Permitted		0.968			0.729			0.784			0.862	
Satd. Flow (perm)	0	1731	0	0	1338	0	0	1406	0	0	1578	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		543			653			565			383	
Travel Time (s)		12.3			14.8			12.8			8.7	
Confl. Peds. (#/hr)			8	8					1	1		
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	34	306	108	76	109	20	59	151	65	54	221	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	448	0	0	205	0	0	275	0	0	314	0
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	81		20	81		20	116		20	106	
Trailing Detector (ft)	0	75		0	75		0	110		0	100	
Detector 1 Position(ft)	0	75		0	75		0	110		0	100	
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	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	19.0	19.0		19.0	19.0		19.0	19.0		19.0	19.0	
Total Split (s)	34.0	34.0		34.0	34.0		29.0	29.0		29.0	29.0	
Total Split (%)	41.5%	41.5%		41.5%	41.5%		35.4%	35.4%		35.4%	35.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	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			4.0			4.0	
Lead/Lag							Lag	Lag		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		2.0	2.0		2.0	2.0	

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	19.0
Total Split (s)	19.0
Total Split (%)	23%
Maximum Green (s)	17.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0

Farmington Connectivity Study  
13: Stafford Ave & Stevens St

Existing Conditions  
AM PEAK

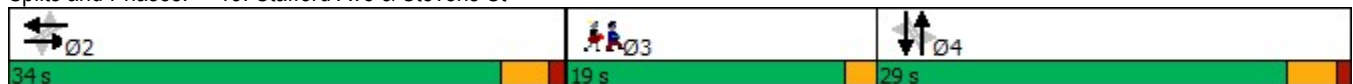


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		30.1			30.1			18.1				18.1
Actuated g/C Ratio		0.40			0.40			0.24				0.24
v/c Ratio		0.65			0.38			0.82				0.83
Control Delay		24.5			19.6			46.5				45.9
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		24.5			19.6			46.5				45.9
LOS		C			B			D				D
Approach Delay		24.5			19.6			46.5				45.9
Approach LOS		C			B			D				D
Queue Length 50th (ft)		157			63			121				139
Queue Length 95th (ft)		277			127			190				210
Internal Link Dist (ft)		463			573			485				303
Turn Bay Length (ft)												
Base Capacity (vph)		692			534			468				525
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		0.65			0.38			0.59				0.60

Intersection Summary

Area Type:	Other
Cycle Length:	82
Actuated Cycle Length:	75.2
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.83
Intersection Signal Delay:	34.0
Intersection LOS:	C
Intersection Capacity Utilization:	53.2%
ICU Level of Service:	A
Analysis Period (min):	15

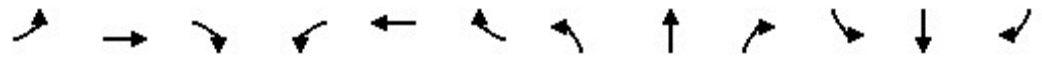
Splits and Phases: 13: Stafford Ave & Stevens St



Lane Group	Ø3
Recall Mode	Ped
Walk Time (s)	7.0
Flash Dont Walk (s)	10.0
Pedestrian Calls (#/hr)	9
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

Farmington Connectivity Study  
 14: S Main St (RT 177) & Mill St

Existing Conditions  
 AM PEAK

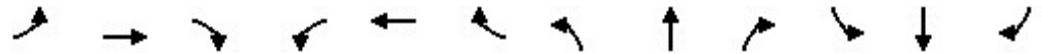


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗	↖	↗		↖	↗	
Traffic Volume (vph)	26	6	51	37	6	7	56	641	53	3	634	12
Future Volume (vph)	26	6	51	37	6	7	56	641	53	3	634	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		95	0		100	60		0	0		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
Frt			0.850			0.850		0.989			0.997	
Flt Protected		0.961			0.958		0.950			0.950		
Satd. Flow (prot)	0	1790	1583	0	1785	1583	1770	1842	0	1770	1857	0
Flt Permitted		0.734			0.731		0.272			0.308		
Satd. Flow (perm)	0	1367	1583	0	1362	1583	507	1842	0	574	1857	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			30			25				25
Link Distance (ft)		906			356			584				461
Travel Time (s)		24.7			8.1			15.9				12.6
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	27	6	53	39	6	7	58	668	55	3	660	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	33	53	0	45	7	58	723	0	3	673	0
Number of Detectors	1	1	1	1	1	1	1	0		0	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	50	50	20	40	40	50	0		0	0	
Trailing Detector (ft)	0	0	0	0	-10	-10	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	-10	-10	0	0		0	0	
Detector 1 Size(ft)	20	50	50	20	50	50	50	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	pm+ov	Perm	NA	Prot	D.P+P	NA		Perm	NA	
Protected Phases		4	2		4	4	2	1 2				1
Permitted Phases	4		4	4			1			1		
Detector Phase	4	4	2	4	4	4	2	2		1	1	
Switch Phase												
Minimum Initial (s)	6.0	6.0	5.0	6.0	6.0	6.0	5.0			25.0	25.0	
Minimum Split (s)	10.3	10.3	9.6	10.3	10.3	10.3	9.6			29.6	29.6	
Total Split (s)	21.3	21.3	15.6	21.3	21.3	21.3	15.6			49.6	49.6	
Total Split (%)	19.1%	19.1%	14.0%	19.1%	19.1%	19.1%	14.0%			44.5%	44.5%	
Maximum Green (s)	17.0	17.0	11.0	17.0	17.0	17.0	11.0			45.0	45.0	
Yellow Time (s)	3.2	3.2	3.6	3.2	3.2	3.2	3.6			3.6	3.6	
All-Red Time (s)	1.1	1.1	1.0	1.1	1.1	1.1	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)		4.3	4.6		4.3	4.3	4.6			4.6	4.6	
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag			Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	

Lane Group	Ø3
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)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	25.0
Total Split (s)	25.0
Total Split (%)	22%
Maximum Green (s)	21.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes

Farmington Connectivity Study  
 14: S Main St (RT 177) & Mill St

Existing Conditions  
 AM PEAK

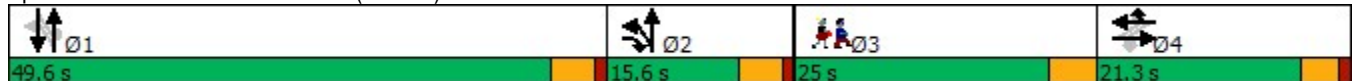


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5			3.0	3.0	
Recall Mode	None	None	None	None	None	None	None			Max	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		7.2	16.0		7.2	7.2	54.2	60.1		46.5	46.5	
Actuated g/C Ratio		0.09	0.21		0.09	0.09	0.71	0.79		0.61	0.61	
v/c Ratio		0.26	0.16		0.35	0.05	0.12	0.50		0.01	0.60	
Control Delay		41.8	21.4		44.6	37.7	6.7	7.9		12.7	16.3	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.2		0.0	1.0	
Total Delay		41.8	21.4		44.6	37.7	6.7	8.1		12.7	17.3	
LOS		D	C		D	D	A	A		B	B	
Approach Delay		29.2			43.7			8.0			17.2	
Approach LOS		C			D			A			B	
Queue Length 50th (ft)		14	18		19	3	4	76		0	151	
Queue Length 95th (ft)		51	40		66	18	34	457		7	#611	
Internal Link Dist (ft)		826			276			504			381	
Turn Bay Length (ft)			95			100	60					
Base Capacity (vph)		314	348		313	364	571	1507		349	1131	
Starvation Cap Reductn		0	0		0	0	0	244		0	225	
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		0.11	0.15		0.14	0.02	0.10	0.57		0.01	0.74	

Intersection Summary

Area Type: Other  
 Cycle Length: 111.5  
 Actuated Cycle Length: 76.4  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.60  
 Intersection Signal Delay: 14.2  
 Intersection LOS: B  
 Intersection Capacity Utilization 63.0%  
 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.

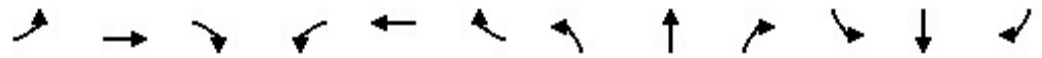
Splits and Phases: 14: S Main St (RT 177) & Mill St



Lane Group	Ø3
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	14.0
Pedestrian Calls (#/hr)	1
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

Farmington Connectivity Study  
 15: S Main St (RT 177) & Railroad Ave/New Britain Ave

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (vph)	5	6	23	15	2	141	8	600	18	181	527	3
Future Volume (vph)	5	6	23	15	2	141	8	600	18	181	527	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		200	80		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			80			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00		1.00		
Frt		0.907				0.850		0.996			0.999	
Flt Protected		0.993			0.958		0.950			0.950		
Satd. Flow (prot)	0	1661	0	0	1767	1568	1752	1836	0	1752	1843	0
Flt Permitted		0.959			0.753		0.384			0.232		
Satd. Flow (perm)	0	1605	0	0	1389	1568	708	1836	0	428	1843	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			30			25			25	
Link Distance (ft)		579			590			1222			584	
Travel Time (s)		15.8			13.4			33.3			15.9	
Confl. Peds. (#/hr)									4	4		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	5	6	24	15	2	145	8	619	19	187	543	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	35	0	0	17	145	8	638	0	187	546	0
Number of Detectors	1	1		1	1	1	0	2		1	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40	40	0	206		50	206	
Trailing Detector (ft)	0	-10		0	-10	-10	0	100		0	100	
Detector 1 Position(ft)	0	-10		0	-10	-10	0	100		0	100	
Detector 1 Size(ft)	20	50		20	50	50	20	6		50	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)								200			200	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		D.P+P	NA	
Protected Phases		4			4	24		1		2	12	
Permitted Phases	4			4			1			1		
Detector Phase	4	4		4	4	4	1	1		2	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		25.0	25.0		5.0		
Minimum Split (s)	10.2	10.2		10.2	10.2		29.6	29.6		9.6		
Total Split (s)	14.2	14.2		14.2	14.2		74.6	74.6		19.6		

Lane Group	Ø3
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)	
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	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	23.0
Total Split (s)	23.0

Farmington Connectivity Study  
 15: S Main St (RT 177) & Railroad Ave/New Britain Ave

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	10.8%	10.8%		10.8%	10.8%		56.8%	56.8%		14.9%		
Maximum Green (s)	10.0	10.0		10.0	10.0		70.0	70.0		15.0		
Yellow Time (s)	3.2	3.2		3.2	3.2		3.6	3.6		3.6		
All-Red Time (s)	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		
Total Lost Time (s)		4.2			4.2		4.6	4.6		4.6		
Lead/Lag	Lag	Lag		Lag	Lag		Lead	Lead		Lag		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes		
Vehicle Extension (s)	1.5	1.5		1.5	1.5		2.5	2.5		1.5		
Recall Mode	None	None		None	None		Min	Min		None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		7.1			7.1	17.8	30.4	30.4		37.0	42.1	
Actuated g/C Ratio		0.12			0.12	0.29	0.49	0.49		0.60	0.68	
v/c Ratio		0.19			0.11	0.32	0.02	0.70		0.47	0.43	
Control Delay		33.7			33.6	19.3	11.2	18.7		14.6	7.0	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		33.7			33.6	19.3	11.2	18.7		14.6	7.0	
LOS		C			C	B	B	B		B	A	
Approach Delay		33.7			20.8			18.6			9.0	
Approach LOS		C			C			B			A	
Queue Length 50th (ft)		9			5	31	1	127		13	48	
Queue Length 95th (ft)		55			33	104	12	481		85	276	
Internal Link Dist (ft)		499			510			1142			504	
Turn Bay Length (ft)						200	80			120		
Base Capacity (vph)		286			247	552	659	1709		680	1555	
Starvation Cap Reductn		0			0	0	0	0		0	90	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.12			0.07	0.26	0.01	0.37		0.28	0.37	

Intersection Summary

Area Type: Other  
 Cycle Length: 131.4  
 Actuated Cycle Length: 61.5  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.70  
 Intersection Signal Delay: 14.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 66.3%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 15: S Main St (RT 177) & Railroad Ave/New Britain Ave



Lane Group	Ø3
Total Split (%)	18%
Maximum Green (s)	19.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	4
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

Farmington Connectivity Study  
 16: S Main St (RT 177) & Webster St

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	43	73	19	606	503	36
Future Volume (vph)	43	73	19	606	503	36
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	0.915				0.991	
Flt Protected	0.982			0.999		
Satd. Flow (prot)	1642	0	0	1825	1810	0
Flt Permitted	0.982			0.999		
Satd. Flow (perm)	1642	0	0	1825	1810	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	805			584	1222	
Travel Time (s)	22.0			15.9	33.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	44	74	19	618	513	37
Shared Lane Traffic (%)						
Lane Group Flow (vph)	118	0	0	637	550	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	60.8%
ICU Level of Service	B
Analysis Period (min)	15

Farmington Connectivity Study  
 16: S Main St (RT 177) & Webster St

Existing Conditions  
 AM PEAK



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	43	73	19	606	503	36
Future Volume (Veh/h)	43	73	19	606	503	36
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	44	74	19	618	513	37
<b>Pedestrians</b>						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				1222		
pX, platoon unblocked	0.97	0.97	0.97			
vC, conflicting volume	1188	532	550			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1179	506	525			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	78	86	98			
cM capacity (veh/h)	199	548	1005			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	118	637	550			
Volume Left	44	19	0			
Volume Right	74	0	37			
cSH	332	1005	1700			
Volume to Capacity	0.36	0.02	0.32			
Queue Length 95th (ft)	39	1	0			
Control Delay (s)	21.7	0.5	0.0			
Lane LOS	C	A				
Approach Delay (s)	21.7	0.5	0.0			
Approach LOS	C					
<b>Intersection Summary</b>						
Average Delay			2.2			
Intersection Capacity Utilization			60.8%	ICU Level of Service	B	
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	43	73	19	606	503	36
Future Vol, veh/h	43	73	19	606	503	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	44	74	19	618	513	37

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1188	532	550	0	-	0
Stage 1	532	-	-	-	-	-
Stage 2	656	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.14	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.236	-	-	-
Pot Cap-1 Maneuver	206	544	1010	-	-	-
Stage 1	585	-	-	-	-	-
Stage 2	513	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	200	544	1010	-	-	-
Mov Cap-2 Maneuver	200	-	-	-	-	-
Stage 1	568	-	-	-	-	-
Stage 2	513	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21.7	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1010	-	332	-	-
HCM Lane V/C Ratio	0.019	-	0.357	-	-
HCM Control Delay (s)	8.6	0	21.7	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.6	-	-

Farmington Connectivity Study  
 17: Plainville Ave (RT 177) & Coopermine Rd

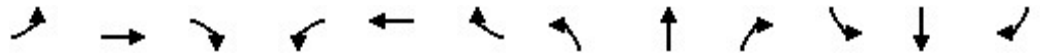
Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	154	69	52	36	22	14	29	454	39	40	587	93
Future Volume (vph)	154	69	52	36	22	14	29	454	39	40	587	93
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	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.974			0.974			0.990			0.983	
Fl <sub>t</sub> Protected		0.973			0.976			0.997			0.997	
Satd. Flow (prot)	0	1783	0	0	1788	0	0	1857	0	0	1844	0
Fl <sub>t</sub> Permitted		0.802			0.761			0.930			0.944	
Satd. Flow (perm)	0	1469	0	0	1394	0	0	1732	0	0	1746	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			12			6			11	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		498			472			529			491	
Travel Time (s)		9.7			9.2			10.3			9.6	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	175	78	59	41	25	16	33	516	44	45	667	106
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	312	0	0	82	0	0	593	0	0	818	0
Number of Detectors	1	3		1	3		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	24		20	24		20	361		20	361	
Trailing Detector (ft)	0	-10		0	-10		0	185		0	185	
Detector 1 Position(ft)	0	-10		0	-10		0	185		0	185	
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)		6			6			355			355	
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	
Detector 3 Position(ft)		18			18							
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	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	20.5	20.5		20.5	20.5		21.9	21.9		21.9	21.9	
Total Split (s)	40.5	40.5		40.5	40.5		66.9	66.9		66.9	66.9	

Farmington Connectivity Study  
 17: Plainville Ave (RT 177) & Coopermine Rd

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	37.7%	37.7%		37.7%	37.7%		62.3%	62.3%		62.3%	62.3%	
Maximum Green (s)	35.0	35.0		35.0	35.0		60.0	60.0		60.0	60.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		4.4	4.4		4.4	4.4	
All-Red Time (s)	2.2	2.2		2.2	2.2		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.5			5.5			6.9			6.9	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5		1.5	1.5		5.0	5.0		5.0	5.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	14.0	14.0		14.0	14.0							
Flash Dont Walk (s)	1.0	1.0		1.0	1.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		23.3			23.3			55.1			55.1	
Actuated g/C Ratio		0.26			0.26			0.60			0.60	
v/c Ratio		0.81			0.23			0.57			0.77	
Control Delay		49.0			25.9			14.5			21.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		49.0			25.9			14.5			21.0	
LOS		D			C			B			C	
Approach Delay		49.0			25.9			14.5			21.0	
Approach LOS		D			C			B			C	
Queue Length 50th (ft)		175			34			187			317	
Queue Length 95th (ft)		265			70			356			604	
Internal Link Dist (ft)		418			392			449			411	
Turn Bay Length (ft)												
Base Capacity (vph)		593			563			1186			1197	
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		0.53			0.15			0.50			0.68	

Intersection Summary

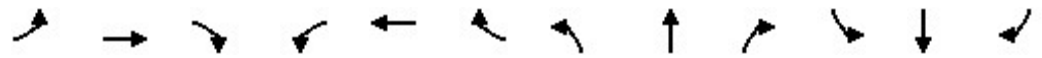
Area Type: Other  
 Cycle Length: 107.4  
 Actuated Cycle Length: 91.3  
 Natural Cycle: 70  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.81  
 Intersection Signal Delay: 23.9  
 Intersection Capacity Utilization 79.8%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service D

Splits and Phases: 17: Plainville Ave (RT 177) & Coopermine Rd



Farmington Connectivity Study  
 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd

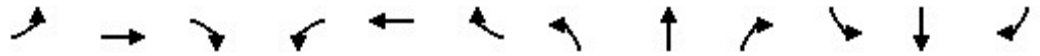
Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (vph)	39	177	236	13	35	23	90	445	29	71	670	18
Future Volume (vph)	39	177	236	13	35	23	90	445	29	71	670	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	250		0	80		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			100			40		
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		0.930			0.957			0.991			0.996	
Flt Protected		0.996			0.991		0.950			0.950		
Satd. Flow (prot)	0	1725	0	0	1767	0	1770	1846	0	1770	1855	0
Flt Permitted		0.970			0.919		0.143			0.367		
Satd. Flow (perm)	0	1680	0	0	1638	0	266	1846	0	684	1855	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					19			4				2
Link Speed (mph)		30			30			45				45
Link Distance (ft)		594			761			713				527
Travel Time (s)		13.5			17.3			10.8				8.0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	40	181	241	13	36	23	92	454	30	72	684	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	462	0	0	72	0	92	484	0	72	702	0
Number of Detectors	1	3		1	2		3	1		3	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	18		20	12		24	356		24	206	
Trailing Detector (ft)	0	-10		0	-6		-6	350		-6	200	
Detector 1 Position(ft)	0	-10		0	-6		-6	350		-6	200	
Detector 1 Size(ft)	20	6		20	6		6	6		6	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)		0			6		6			6		
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		
Detector 3 Position(ft)		12					18			18		
Detector 3 Size(ft)		6					6			6		
Detector 3 Type		Cl+Ex					Cl+Ex			Cl+Ex		
Detector 3 Channel												
Detector 3 Extend (s)		0.0					0.0			0.0		
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		3.0	30.0		3.0	30.0	

Farmington Connectivity Study  
 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	30.9	30.9		30.9	30.9		7.0	37.1		7.0	37.1	
Total Split (s)	34.9	34.9		34.9	34.9		19.0	67.1		12.0	67.1	
Total Split (%)	28.8%	28.8%		28.8%	28.8%		15.7%	55.5%		9.9%	55.5%	
Maximum Green (s)	30.0	30.0		30.0	30.0		15.0	60.0		8.0	60.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.0	4.4		3.0	4.4	
All-Red Time (s)	1.6	1.6		1.6	1.6		1.0	2.7		1.0	2.7	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.9			4.9		4.0	7.1		4.0	7.1	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)	25.0	25.0		25.0	25.0							
Flash Dont Walk (s)	1.0	1.0		1.0	1.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		30.8			30.8		53.8	44.2		50.9	42.8	
Actuated g/C Ratio		0.32			0.32		0.56	0.46		0.53	0.45	
v/c Ratio		0.85			0.13		0.34	0.56		0.17	0.84	
Control Delay		50.1			23.2		11.2	21.0		8.7	33.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		50.1			23.2		11.2	21.0		8.7	33.9	
LOS		D			C		B	C		A	C	
Approach Delay		50.1			23.2			19.5			31.5	
Approach LOS		D			C			B			C	
Queue Length 50th (ft)		264			23		22	208		17	372	
Queue Length 95th (ft)		#591			70		41	305		33	554	
Internal Link Dist (ft)		514			681			633			447	
Turn Bay Length (ft)							250			80		
Base Capacity (vph)		543			542		397	1333		467	1199	
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		0.85			0.13		0.23	0.36		0.15	0.59	

Intersection Summary

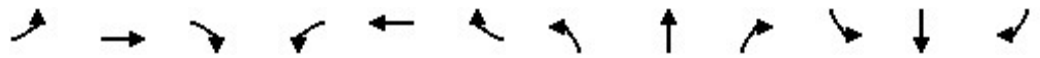
Area Type: Other  
 Cycle Length: 121  
 Actuated Cycle Length: 95.4  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 32.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 84.1%  
 ICU Level of Service E  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd



Farmington Connectivity Study  
 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	642	134	73	299	66	81	368	86	232	682	85
Future Volume (vph)	100	642	134	73	299	66	81	368	86	232	682	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260		260	180		0	250		250	165		165
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (ft)	190			170			150			115		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor			0.99	1.00			1.00			1.00	1.00	
Frt			0.850		0.973				0.850		0.983	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	3444	0	1770	1863	1583	1770	3473	0
Flt Permitted	0.950			0.950			0.185			0.163		
Satd. Flow (perm)	1770	1863	1563	1767	3444	0	344	1863	1583	304	3473	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			106		17				88		8	
Link Speed (mph)		45			45			40			45	
Link Distance (ft)		780			1567			643			474	
Travel Time (s)		11.8			23.7			11.0			7.2	
Confl. Peds. (#/hr)			1	1			3		1	1		3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	108	690	144	78	322	71	87	396	92	249	733	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	108	690	144	78	393	0	87	396	92	249	824	0
Number of Detectors	3	2	2	3	2		3	3	3	3	3	
Detector Template												
Leading Detector (ft)	24	306	306	24	306		24	24	24	24	24	
Trailing Detector (ft)	-6	150	150	-6	150		-6	-6	-6	-6	-6	
Detector 1 Position(ft)	-6	150	150	-6	150		-6	-6	-6	-6	-6	
Detector 1 Size(ft)	6	6	6	6	6		6	6	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	6	300	300	6	300		6	6	6	6	6	
Detector 2 Size(ft)	6	6	6	6	6		6	6	6	6	6	
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 3 Position(ft)	18			18			18	18	18	18	18	
Detector 3 Size(ft)	6			6			6	6	6	6	6	
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0	0.0	0.0	0.0	
Turn Type	Prot	NA	custom	Prot	NA		pm+pt	NA	pt+ov	pm+pt	NA	
Protected Phases	1	6	6	5	2		3	8	5 8	7	4	
Permitted Phases			6				8			4		
Detector Phase	1	6	6	5	2		3	8	8	7	4	

Lane Group	Ø9
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	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	

Farmington Connectivity Study  
 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
<b>Switch Phase</b>												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0		5.0	9.0		5.0	9.0	
Minimum Split (s)	9.0	20.2	20.2	9.0	20.2		9.0	14.7		9.0	14.7	
Total Split (s)	14.0	45.2	45.2	14.0	35.2		19.0	40.7		19.0	40.7	
Total Split (%)	9.3%	30.0%	30.0%	9.3%	23.3%		12.6%	27.0%		12.6%	27.0%	
Maximum Green (s)	10.0	40.0	40.0	10.0	30.0		15.0	35.0		15.0	35.0	
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2		3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.2		1.0	1.2	
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)	4.0	5.2	5.2	4.0	5.2		4.0	5.7		4.0	5.7	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	2.5	2.5	1.5	2.5		2.0	3.0		2.0	2.0	
Recall Mode	None	Min	Min	None	Min		None	None		None	None	
<b>Walk Time (s)</b>												
<b>Flash Dont Walk (s)</b>												
<b>Pedestrian Calls (#/hr)</b>												
Act Effct Green (s)	10.0	40.7	40.7	8.7	39.3		41.0	31.1	44.9	51.8	38.1	
Actuated g/C Ratio	0.08	0.34	0.34	0.07	0.33		0.34	0.26	0.37	0.43	0.32	
v/c Ratio	0.73	1.09	0.24	0.61	0.35		0.40	0.82	0.14	0.79	0.74	
Control Delay	83.5	102.2	12.3	77.6	32.3		29.0	57.7	5.0	43.6	42.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	83.5	102.2	12.3	77.6	32.3		29.0	57.7	5.0	43.6	42.4	
LOS	F	F	B	E	C		C	E	A	D	D	
Approach Delay		86.3			39.8			44.9			42.7	
Approach LOS		F			D			D			D	
Queue Length 50th (ft)	80	~572	19	57	108		36	271	2	114	274	
Queue Length 95th (ft)	#231	#1151	88	#154	214		99	#580	29	#351	#557	
Internal Link Dist (ft)		700			1487			563			394	
Turn Bay Length (ft)	260		260	180			250		250	165		
Base Capacity (vph)	149	631	606	149	1178		319	552	647	317	1118	
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	0.72	1.09	0.24	0.52	0.33		0.27	0.72	0.14	0.79	0.74	










**Intersection Summary**

Area Type: Other  
 Cycle Length: 150.9  
 Actuated Cycle Length: 119.9  
 Natural Cycle: 145  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.09  
 Intersection Signal Delay: 56.1      Intersection LOS: E  
 Intersection Capacity Utilization 85.9%      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.

Lane Group	Ø9
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	32.0
Total Split (s)	32.0
Total Split (%)	21%
Maximum Green (s)	28.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
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)	21.0
Pedestrian Calls (#/hr)	7
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

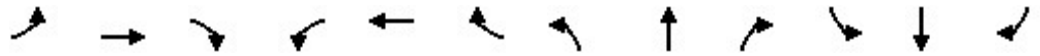
Queue shown is maximum after two cycles.

Splits and Phases: 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)

 Ø1	 Ø2	 Ø3	 Ø4	 Ø9
14 s	35.2 s	19 s	40.7 s	32 s
 Ø5	 Ø6	 Ø7	 Ø8	
14 s	45.2 s	19 s	40.7 s	

Farmington Connectivity Study  
 20: Unionville Ave (RT 177) & Northwest Dr

Existing Conditions  
 AM PEAK

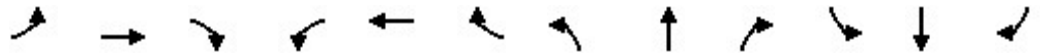


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	151	70	39	113	48	159	505	153	98	698	42
Future Volume (vph)	27	151	70	39	113	48	159	505	153	98	698	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	210		0	260		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
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		0.952			0.955			0.965			0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	1739	0	1736	1745	0	1736	3350	0	1736	3443	0
Flt Permitted	0.643			0.441			0.212			0.331		
Satd. Flow (perm)	1175	1739	0	806	1745	0	387	3350	0	605	3443	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			15			30			5	
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		710			592			572			675	
Travel Time (s)		13.8			11.5			9.8			11.5	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	30	170	79	44	127	54	179	567	172	110	784	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	30	249	0	44	181	0	179	739	0	110	831	0
Number of Detectors	3	3		3	3		3	2		3	2	
Detector Template												
Leading Detector (ft)	24	24		24	24		24	331		24	331	
Trailing Detector (ft)	-6	-6		-6	-6		-6	150		-6	150	
Detector 1 Position(ft)	-6	-6		-6	-6		-6	150		-6	150	
Detector 1 Size(ft)	6	6		6	6		6	6		6	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)	6	6		6	6		6	325		6	325	
Detector 2 Size(ft)	6	6		6	6		6	6		6	6	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 3 Position(ft)	18	18		18	18		18			18		
Detector 3 Size(ft)	6	6		6	6		6			6		
Detector 3 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex		
Detector 3 Channel												
Detector 3 Extend (s)	0.0	0.0		0.0	0.0		0.0			0.0		
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	
Switch Phase												

Lane Group	Ø9
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)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	

Farmington Connectivity Study  
 20: Unionville Ave (RT 177) & Northwest Dr

Existing Conditions  
 AM PEAK

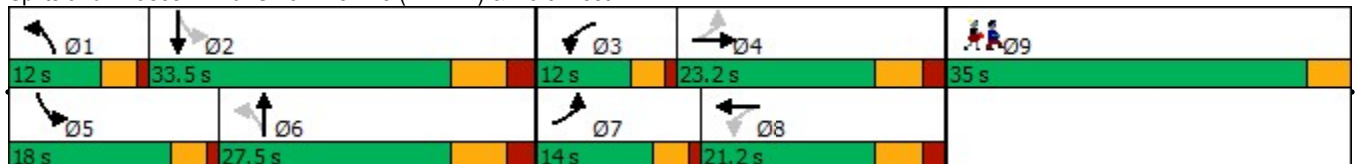


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	9.0		4.0	9.0		4.0	15.0		4.0	15.0	
Minimum Split (s)	8.0	15.2		8.0	15.2		8.0	22.5		8.0	22.5	
Total Split (s)	14.0	23.2		12.0	21.2		12.0	27.5		18.0	33.5	
Total Split (%)	12.1%	20.1%		10.4%	18.3%		10.4%	23.8%		15.6%	29.0%	
Maximum Green (s)	10.0	17.0		8.0	15.0		8.0	20.0		14.0	26.0	
Yellow Time (s)	3.0	4.1		3.0	4.1		3.0	4.8		3.0	4.8	
All-Red Time (s)	1.0	2.1		1.0	2.1		1.0	2.7		1.0	2.7	
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	6.2		4.0	6.2		4.0	7.5		4.0	7.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	3.0		1.5	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	21.3	15.8		22.6	17.8		39.5	29.7		36.3	26.2	
Actuated g/C Ratio	0.29	0.21		0.31	0.24		0.54	0.40		0.49	0.36	
v/c Ratio	0.08	0.65		0.14	0.42		0.51	0.54		0.28	0.68	
Control Delay	16.6	34.4		17.3	25.9		14.7	20.5		11.1	24.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	16.6	34.4		17.3	25.9		14.7	20.5		11.1	24.6	
LOS	B	C		B	C		B	C		B	C	
Approach Delay		32.5			24.2			19.4			23.1	
Approach LOS		C			C			B			C	
Queue Length 50th (ft)	9	103		14	58		43	148		25	185	
Queue Length 95th (ft)	25	180		33	130		79	218		51	254	
Internal Link Dist (ft)		630			512			492			595	
Turn Bay Length (ft)							210			260		
Base Capacity (vph)	451	417		353	448		354	1367		559	1227	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.07	0.60		0.12	0.40		0.51	0.54		0.20	0.68	

Intersection Summary

Area Type: Other  
 Cycle Length: 115.7  
 Actuated Cycle Length: 73.8  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.68  
 Intersection Signal Delay: 22.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 63.1%  
 ICU Level of Service B  
 Analysis Period (min) 15

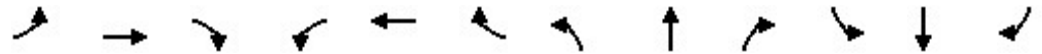
Splits and Phases: 20: Unionville Ave (RT 177) & Northwest Dr



Lane Group	Ø9
Minimum Initial (s)	1.0
Minimum Split (s)	35.0
Total Split (s)	35.0
Total Split (%)	30%
Maximum Green (s)	31.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
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)	24.0
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	
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	
<b>Intersection Summary</b>	

Farmington Connectivity Study  
 21: New Britain Ave & Red Oak Hill Rd

Existing Conditions  
 AM PEAK



















Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	11	213	69	7	46	59	16	65	6	132	121	8
Future Volume (vph)	11	213	69	7	46	59	16	65	6	132	121	8
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	1.00	1.00	1.00	1.00	1.00
Frt		0.968			0.929			0.990			0.996	
Flt Protected		0.998			0.997			0.991			0.975	
Satd. Flow (prot)	0	1782	0	0	1709	0	0	1810	0	0	1791	0
Flt Permitted		0.998			0.997			0.991			0.975	
Satd. Flow (perm)	0	1782	0	0	1709	0	0	1810	0	0	1791	0
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		506			528			2775			1031	
Travel Time (s)		9.9			10.3			63.1			23.4	
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 (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	12	232	75	8	50	64	17	71	7	143	132	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	319	0	0	122	0	0	95	0	0	284	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	46.2% ICU Level of Service A
Analysis Period (min)	15

Farmington Connectivity Study  
 21: New Britain Ave & Red Oak Hill Rd

Existing Conditions  
 AM PEAK

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	11	213	69	7	46	59	16	65	6	132	121	8
Future Volume (vph)	11	213	69	7	46	59	16	65	6	132	121	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
Hourly flow rate (vph)	12	232	75	8	50	64	17	71	7	143	132	9
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	319	122	95	284								
Volume Left (vph)	12	8	17	143								
Volume Right (vph)	75	64	7	9								
Hadj (s)	-0.08	-0.25	0.04	0.13								
Departure Headway (s)	5.1	5.2	5.6	5.4								
Degree Utilization, x	0.45	0.18	0.15	0.42								
Capacity (veh/h)	668	622	567	628								
Control Delay (s)	12.2	9.3	9.6	12.2								
Approach Delay (s)	12.2	9.3	9.6	12.2								
Approach LOS	B	A	A	B								
Intersection Summary												
Delay			11.5									
Level of Service			B									
Intersection Capacity Utilization			46.2%	ICU Level of Service	A							
Analysis Period (min)			15									

Intersection	
Intersection Delay, s/veh	11.5
Intersection LOS	B

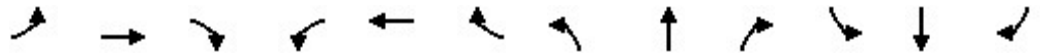
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	213	69	7	46	59	16	65	6	132	121	8
Future Vol, veh/h	11	213	69	7	46	59	16	65	6	132	121	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	12	232	75	8	50	64	17	71	7	143	132	9
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.2	9.3	9.6	12.2
HCM LOS	B	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	18%	4%	6%	51%
Vol Thru, %	75%	73%	41%	46%
Vol Right, %	7%	24%	53%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	87	293	112	261
LT Vol	16	11	7	132
Through Vol	65	213	46	121
RT Vol	6	69	59	8
Lane Flow Rate	95	318	122	284
Geometry Grp	1	1	1	1
Degree of Util (X)	0.146	0.45	0.176	0.421
Departure Headway (Hd)	5.574	5.086	5.19	5.347
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	642	713	690	672
Service Time	3.617	3.086	3.225	3.38
HCM Lane V/C Ratio	0.148	0.446	0.177	0.423
HCM Control Delay	9.6	12.2	9.3	12.2
HCM Lane LOS	A	B	A	B
HCM 95th-tile Q	0.5	2.3	0.6	2.1

Farmington Connectivity Study  
 22: New Britain Ave & Meadow Rd

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	49	153	80	17	53	0	29	108	8	0	163	39
Future Volume (vph)	49	153	80	17	53	0	29	108	8	0	163	39
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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.962						0.992			0.974	
Flt Protected		0.991			0.988			0.990				
Satd. Flow (prot)	0	1725	0	0	1788	0	0	1777	0	0	1762	0
Flt Permitted		0.991			0.988			0.990				
Satd. Flow (perm)	0	1725	0	0	1788	0	0	1777	0	0	1762	0
Link Speed (mph)		30			35			30			30	
Link Distance (ft)		414			396			469			2775	
Travel Time (s)		9.4			7.7			10.7			63.1	
Confl. Peds. (#/hr)							2		1	1		2
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	60	189	99	21	65	0	36	133	10	0	201	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	348	0	0	86	0	0	179	0	0	249	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	48.1%
Analysis Period (min)	15
	ICU Level of Service A

Farmington Connectivity Study  
 22: New Britain Ave & Meadow Rd

Existing Conditions  
 AM PEAK



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	49	153	80	17	53	0	29	108	8	0	163	39
Future Volume (vph)	49	153	80	17	53	0	29	108	8	0	163	39
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	60	189	99	21	65	0	36	133	10	0	201	48

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	348	86	179	249
Volume Left (vph)	60	21	36	0
Volume Right (vph)	99	0	10	48
Hadj (s)	-0.05	0.13	0.09	-0.03
Departure Headway (s)	5.2	5.8	5.6	5.4
Degree Utilization, x	0.50	0.14	0.28	0.37
Capacity (veh/h)	653	544	579	619
Control Delay (s)	13.3	9.8	10.8	11.6
Approach Delay (s)	13.3	9.8	10.8	11.6
Approach LOS	B	A	B	B

Intersection Summary			
Delay		11.9	
Level of Service		B	
Intersection Capacity Utilization	48.1%	ICU Level of Service	A
Analysis Period (min)		15	

Intersection	
Intersection Delay, s/veh	11.9
Intersection LOS	B

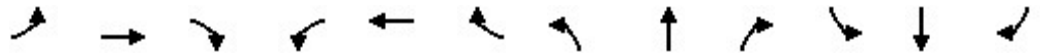
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	49	153	80	17	53	0	29	108	8	0	163	39
Future Vol, veh/h	49	153	80	17	53	0	29	108	8	0	163	39
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	60	189	99	21	65	0	36	133	10	0	201	48
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.3	9.8	10.8	11.6
HCM LOS	B	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	20%	17%	24%	0%
Vol Thru, %	74%	54%	76%	81%
Vol Right, %	6%	28%	0%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	145	282	70	202
LT Vol	29	49	17	0
Through Vol	108	153	53	163
RT Vol	8	80	0	39
Lane Flow Rate	179	348	86	249
Geometry Grp	1	1	1	1
Degree of Util (X)	0.278	0.501	0.139	0.372
Departure Headway (Hd)	5.596	5.184	5.798	5.365
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	641	696	617	671
Service Time	3.638	3.22	3.847	3.403
HCM Lane V/C Ratio	0.279	0.5	0.139	0.371
HCM Control Delay	10.8	13.3	9.8	11.6
HCM Lane LOS	B	B	A	B
HCM 95th-tile Q	1.1	2.8	0.5	1.7

Farmington Connectivity Study  
 23: New Britain Ave & Scott Swamp Rd (US 6)

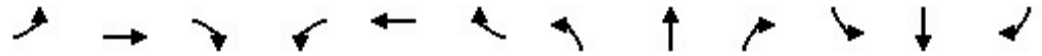
Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	807	26	13	505	118	18	36	12	146	68	28
Future Volume (vph)	24	807	26	13	505	118	18	36	12	146	68	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	340		0	100		320	190		0	120		0
Storage Lanes	1		0	1		1	1		0	2		0
Taper Length (ft)	150			100			100			110		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.995				0.850		0.962			0.956	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3522	0	1770	3539	1583	1770	1792	0	3433	1781	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3522	0	1770	3539	1583	1770	1792	0	3433	1781	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				139		14			22	
Link Speed (mph)		45			45			25			35	
Link Distance (ft)		3978			920			676			631	
Travel Time (s)		60.3			13.9			18.4			12.3	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	28	949	31	15	594	139	21	42	14	172	80	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	28	980	0	15	594	139	21	56	0	172	113	0
Number of Detectors	3	0		3	0	0	3	3		3	3	
Detector Template												
Leading Detector (ft)	24	0		24	0	0	24	24		24	24	
Trailing Detector (ft)	-10	0		-10	0	0	-6	-6		-6	-6	
Detector 1 Position(ft)	-10	0		-10	0	0	-6	-6		-6	-6	
Detector 1 Size(ft)	6	6		6	6	20	6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
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)	6			6			6	6		6	6	
Detector 2 Size(ft)	6			6			6	6		6	6	
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0		0.0	0.0	
Detector 3 Position(ft)	18			18			18	18		18	18	
Detector 3 Size(ft)	6			6			6	6		6	6	
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0		0.0	0.0	
Turn Type	Prot	NA		Prot	NA	pt+ov	Split	NA		Split	NA	
Protected Phases	1	6		5	2	2 7	8	8		7	7	
Permitted Phases												
Detector Phase	1	6		5	2	2	8	8		7	7	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0		7.0	7.0	

Farmington Connectivity Study  
 23: New Britain Ave & Scott Swamp Rd (US 6)

Existing Conditions  
 AM PEAK

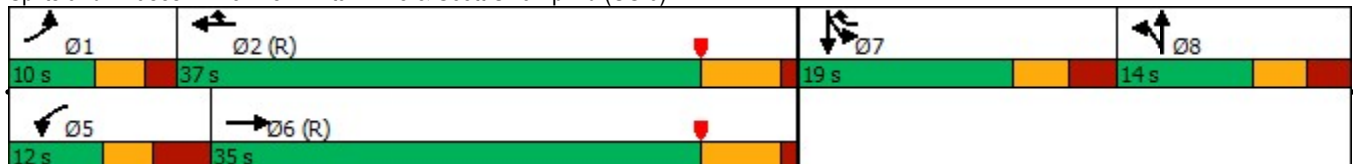


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.9	20.8		11.4	20.8		34.0	34.0		13.2	13.2	
Total Split (s)	10.0	35.0		12.0	37.0		14.0	14.0		19.0	19.0	
Total Split (%)	12.5%	43.8%		15.0%	46.3%		17.5%	17.5%		23.8%	23.8%	
Maximum Green (s)	5.1	29.2		5.6	31.2		8.0	8.0		12.8	12.8	
Yellow Time (s)	3.0	4.8		3.0	4.8		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.9	1.0		3.4	1.0		2.7	2.7		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.9	5.8		6.4	5.8		6.0	6.0		6.2	6.2	
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)							27.0	27.0				
Flash Dont Walk (s)							1.0	1.0				
Pedestrian Calls (#/hr)							0	0				
Act Effect Green (s)	5.5	46.2		5.3	44.3	60.8	6.5	6.5		9.2	9.2	
Actuated g/C Ratio	0.07	0.58		0.07	0.55	0.76	0.08	0.08		0.12	0.12	
v/c Ratio	0.23	0.48		0.13	0.30	0.11	0.15	0.35		0.44	0.51	
Control Delay	40.0	13.4		34.8	13.3	4.5	35.8	33.8		36.1	34.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	40.0	13.4		34.8	13.3	4.5	35.8	33.8		36.1	34.3	
LOS	D	B		C	B	A	D	C		D	C	
Approach Delay		14.1			12.1			34.4			35.3	
Approach LOS		B			B			C			D	
Queue Length 50th (ft)	14	133		7	54	0	10	20		42	44	
Queue Length 95th (ft)	36	269		25	176	61	29	50		64	82	
Internal Link Dist (ft)		3898			840			596			551	
Turn Bay Length (ft)	340			100		320	190			120		
Base Capacity (vph)	122	2034		124	1957	1236	178	192		549	303	
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	0.23	0.48		0.12	0.30	0.11	0.12	0.29		0.31	0.37	

Intersection Summary

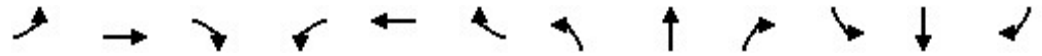
Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 43 (54%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.51  
 Intersection Signal Delay: 17.0  
 Intersection LOS: B  
 Intersection Capacity Utilization 44.0%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 23: New Britain Ave & Scott Swamp Rd (US 6)



Farmington Connectivity Study  
 24: Hyde Rd & Scott Swamp Rd (US 6)

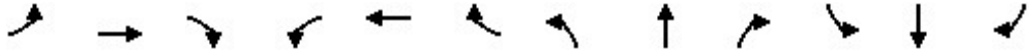
Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	982	11	131	628	12	4	5	38	1	1	1
Future Volume (vph)	10	982	11	131	628	12	4	5	38	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		0	360		0	0		0	0		0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	100			65			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.997				0.850			0.850
Flt Protected	0.950			0.950				0.978			0.976	
Satd. Flow (prot)	1787	3567	0	1787	3564	0	0	1840	1599	0	1836	1599
Flt Permitted	0.950			0.950								
Satd. Flow (perm)	1787	3567	0	1787	3564	0	0	1881	1599	0	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			4				45			113
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1090			523			762			370	
Travel Time (s)		16.5			7.9			20.8			10.1	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	12	1155	13	154	739	14	5	6	45	1	1	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	1168	0	154	753	0	0	11	45	0	2	1
Number of Detectors	3	0		3	0		1	3	3	1	3	3
Detector Template							Left			Left		
Leading Detector (ft)	24	0		24	0		20	24	24	20	24	24
Trailing Detector (ft)	-10	0		-10	0		0	-10	-10	0	-10	-10
Detector 1 Position(ft)	-10	0		-10	0		0	-10	-10	0	-10	-10
Detector 1 Size(ft)	6	6		6	6		20	6	6	20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	6			6			6	6	6		6	6
Detector 2 Size(ft)	6			6			6	6	6		6	6
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0	0.0		0.0	0.0
Detector 3 Position(ft)	18			18			18	18	18		18	18
Detector 3 Size(ft)	6			6			6	6	6		6	6
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	NA		Prot	NA		Perm	NA	pm+ov	Perm	NA	Perm
Protected Phases	1	6		5	2			4	5		4	
Permitted Phases							4		4	4		4
Detector Phase	1	6		5	2		4	4	5	4	4	4
Switch Phase												

Farmington Connectivity Study  
 24: Hyde Rd & Scott Swamp Rd (US 6)

Existing Conditions  
 AM PEAK

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0		7.0	7.0	5.0	7.0	7.0	7.0
Minimum Split (s)	10.5	21.8		10.5	21.8		30.5	30.5	10.5	30.5	30.5	30.5
Total Split (s)	15.0	50.0		15.0	50.0		15.0	15.0	15.0	15.0	15.0	15.0
Total Split (%)	18.8%	62.5%		18.8%	62.5%		18.8%	18.8%	18.8%	18.8%	18.8%	18.8%
Maximum Green (s)	9.5	44.2		9.5	44.2		9.5	9.5	9.5	9.5	9.5	9.5
Yellow Time (s)	3.0	4.8		3.0	4.8		3.3	3.3	3.0	3.3	3.3	3.3
All-Red Time (s)	2.5	1.0		2.5	1.0		2.2	2.2	2.5	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	5.5	5.8		5.5	5.8			5.5	5.5		5.5	5.5
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	None
Walk Time (s)		15.0			15.0		24.0	24.0		24.0	24.0	24.0
Flash Dont Walk (s)		1.0			1.0		1.0	1.0		1.0	1.0	1.0
Pedestrian Calls (#/hr)		0			0		0	0		0	0	0
Act Effct Green (s)	5.4	53.1		10.6	70.3			7.0	15.6		7.0	7.0
Actuated g/C Ratio	0.07	0.66		0.13	0.88			0.09	0.20		0.09	0.09
v/c Ratio	0.10	0.49		0.65	0.24			0.07	0.13		0.01	0.00
Control Delay	44.3	4.5		43.4	3.8			34.7	7.6		33.5	0.0
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	44.3	4.5		43.4	3.8			34.7	7.6		33.5	0.0
LOS	D	A		D	A			C	A		C	A
Approach Delay		4.9			10.5			12.9			22.3	
Approach LOS		A			B			B			C	
Queue Length 50th (ft)	6	21		75	0			5	0		1	0
Queue Length 95th (ft)	m15	43		127	116			20	20		7	0
Internal Link Dist (ft)		1010			443			682			290	
Turn Bay Length (ft)	130			360								
Base Capacity (vph)	212	2367		247	3132			223	357		223	289
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	0.06	0.49		0.62	0.24			0.05	0.13		0.01	0.00

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 2 (3%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.65  
 Intersection Signal Delay: 7.5      Intersection LOS: A  
 Intersection Capacity Utilization 54.6%      ICU Level of Service A  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 24: Hyde Rd & Scott Swamp Rd (US 6)

 Ø1	 Ø2 (R)	 Ø4
15 s	50 s	15 s
 Ø5	 Ø6 (R)	
15 s	50 s	

Farmington Connectivity Study  
 25: Scott Swamp Rd (RT 552) & Scott Swamp Rd (US 6)/Colt Hwy (US 6)

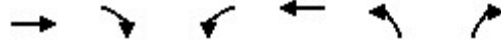
Existing Conditions  
 AM PEAK



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	
Traffic Volume (vph)	921	168	86	603	156	14
Future Volume (vph)	921	168	86	603	156	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		350	350		380	0
Storage Lanes		1	1		1	0
Taper Length (ft)			100		130	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	0.95
Frt		0.850			0.988	
Flt Protected			0.950		0.956	
Satd. Flow (prot)	3539	1583	1770	3539	3413	0
Flt Permitted			0.950		0.956	
Satd. Flow (perm)	3539	1583	1770	3539	3413	0
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			45	30	
Link Distance (ft)	1087			600	782	
Travel Time (s)	16.5			9.1	17.8	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	1084	198	101	709	184	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1084	198	101	709	200	0
Number of Detectors	0	0	3	0	1	
Detector Template						
Leading Detector (ft)	0	0	24	0	56	
Trailing Detector (ft)	0	0	-10	0	50	
Detector 1 Position(ft)	0	0	-10	0	50	
Detector 1 Size(ft)	6	20	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)			6			
Detector 2 Size(ft)			6			
Detector 2 Type			Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)			0.0			
Detector 3 Position(ft)			18			
Detector 3 Size(ft)			6			
Detector 3 Type			Cl+Ex			
Detector 3 Channel						
Detector 3 Extend (s)			0.0			
Turn Type	NA	pm+ov	Prot	NA	Prot	
Protected Phases	2	3	1	12	3	
Permitted Phases		2				
Detector Phase	2	3	1	2	3	
Switch Phase						
Minimum Initial (s)	15.0	7.0	5.0		7.0	

Farmington Connectivity Study  
 25: Scott Swamp Rd (RT 552) & Scott Swamp Rd (US 6)/Colt Hwy (US 6)

Existing Conditions  
 AM PEAK

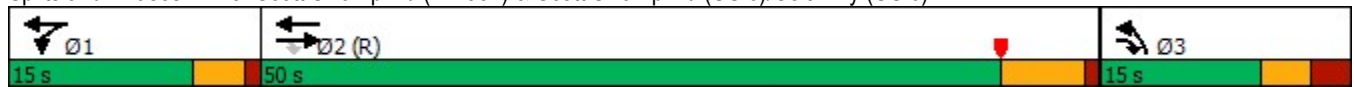


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	21.0	29.5	9.0		29.5	
Total Split (s)	50.0	15.0	15.0		15.0	
Total Split (%)	62.5%	18.8%	18.8%		18.8%	
Maximum Green (s)	44.0	9.5	11.0		9.5	
Yellow Time (s)	5.0	3.0	3.0		3.0	
All-Red Time (s)	1.0	2.5	1.0		2.5	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.0	5.5	4.0		5.5	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	2.0		3.0	
Recall Mode	C-Max	None	Min		None	
Walk Time (s)		23.0			23.0	
Flash Dont Walk (s)		1.0			1.0	
Pedestrian Calls (#/hr)		0			0	
Act Effect Green (s)	47.4	61.9	8.6	62.0	8.5	
Actuated g/C Ratio	0.59	0.77	0.11	0.78	0.11	
v/c Ratio	0.52	0.16	0.53	0.26	0.55	
Control Delay	8.3	3.7	43.4	2.9	39.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	8.3	3.7	43.4	2.9	39.9	
LOS	A	A	D	A	D	
Approach Delay	7.6			7.9	39.9	
Approach LOS	A			A	D	
Queue Length 50th (ft)	210	58	48	40	49	
Queue Length 95th (ft)	53	20	88	53	76	
Internal Link Dist (ft)	1007			520	702	
Turn Bay Length (ft)		350	350		380	
Base Capacity (vph)	2094	1243	243	2742	405	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.52	0.16	0.42	0.26	0.49	

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 34 (43%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.55  
 Intersection Signal Delay: 10.5  
 Intersection Capacity Utilization 49.0%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service A

Splits and Phases: 25: Scott Swamp Rd (RT 552) & Scott Swamp Rd (US 6)/Colt Hwy (US 6)





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3
Lane Configurations							
Traffic Volume (vph)	340	91	77	343	237	105	
Future Volume (vph)	340	91	77	343	237	105	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor				1.00	0.99		
Frt	0.972				0.958		
Flt Protected	0.962			0.991			
Satd. Flow (prot)	1725	0	0	1828	1754	0	
Flt Permitted	0.962			0.625			
Satd. Flow (perm)	1725	0	0	1152	1754	0	
Right Turn on Red		No				Yes	
Satd. Flow (RTOR)					20		
Link Speed (mph)	30			30	30		
Link Distance (ft)	345			413	499		
Travel Time (s)	7.8			9.4	11.3		
Confl. Peds. (#/hr)			3			3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	
Adj. Flow (vph)	378	101	86	381	263	117	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	479	0	0	467	380	0	
Number of Detectors	2		1	1	1		
Detector Template			Left				
Leading Detector (ft)	18		20	206	206		
Trailing Detector (ft)	0		0	200	200		
Detector 1 Position(ft)	0		0	200	200		
Detector 1 Size(ft)	6		20	6	6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		
Detector 2 Position(ft)	12						
Detector 2 Size(ft)	6						
Detector 2 Type	Cl+Ex						
Detector 2 Channel							
Detector 2 Extend (s)	0.0						
Turn Type	Prot		D.P+P	NA	NA		
Protected Phases	4		1	12	2	3	
Permitted Phases			2				
Detector Phase	4		1	1	2		
Switch Phase							
Minimum Initial (s)	5.0		3.0		15.0	1.0	
Minimum Split (s)	9.0		7.0		22.2	25.0	
Total Split (s)	34.0		12.0		39.2	25.0	
Total Split (%)	30.9%		10.9%		35.6%	23%	
Maximum Green (s)	30.0		8.0		32.0	21.0	
Yellow Time (s)	3.0		3.0		4.1	4.0	



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3
All-Red Time (s)	1.0		1.0		3.1		0.0
Lost Time Adjust (s)	0.0				0.0		
Total Lost Time (s)	4.0				7.2		
Lead/Lag	Lag		Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	3.0		3.0		5.0		3.0
Recall Mode	None		Max		Min		None
Walk Time (s)							7.0
Flash Dont Walk (s)							14.0
Pedestrian Calls (#/hr)							3
Act Effct Green (s)	31.0			31.2	19.6		
Actuated g/C Ratio	0.40			0.40	0.25		
v/c Ratio	0.70			0.88	0.84		
Control Delay	29.9			39.8	43.9		
Queue Delay	0.0			0.0	0.0		
Total Delay	29.9			39.8	43.9		
LOS	C			D	D		
Approach Delay	29.9			39.8	43.9		
Approach LOS	C			D	D		
Queue Length 50th (ft)	160			140	150		
Queue Length 95th (ft)	#564			#462	342		
Internal Link Dist (ft)	265			333	419		
Turn Bay Length (ft)							
Base Capacity (vph)	684			531	753		
Starvation Cap Reductn	0			0	0		
Spillback Cap Reductn	0			0	0		
Storage Cap Reductn	0			0	0		
Reduced v/c Ratio	0.70			0.88	0.50		

Intersection Summary

Area Type: Other  
 Cycle Length: 110.2  
 Actuated Cycle Length: 78.2  
 Natural Cycle: 110  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.88  
 Intersection Signal Delay: 37.4  
 Intersection LOS: D  
 Intersection Capacity Utilization 78.3%  
 ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 26: Main St (RT 10) & Meadow Rd





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	16	28	11	110	157	7
Future Volume (vph)	16	28	11	110	157	7
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	0.914				0.994	
Flt Protected	0.982			0.995		
Satd. Flow (prot)	1656	0	0	1835	1834	0
Flt Permitted	0.982			0.995		
Satd. Flow (perm)	1656	0	0	1835	1834	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	203			213	257	
Travel Time (s)	4.6			4.8	5.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	17	30	12	120	171	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	47	0	0	132	179	0
Sign Control	Stop			Free	Free	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	24.9%
ICU Level of Service	A
Analysis Period (min)	15



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	16	28	11	110	157	7
Future Volume (Veh/h)	16	28	11	110	157	7
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	30	12	120	171	8
<b>Pedestrians</b>						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	319	175	179			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	319	175	179			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	97	99			
cM capacity (veh/h)	666	866	1391			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	47	132	179			
Volume Left	17	12	0			
Volume Right	30	0	8			
cSH	781	1391	1700			
Volume to Capacity	0.06	0.01	0.11			
Queue Length 95th (ft)	5	1	0			
Control Delay (s)	9.9	0.8	0.0			
Lane LOS	A	A				
Approach Delay (s)	9.9	0.8	0.0			
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay			1.6			
Intersection Capacity Utilization			24.9%	ICU Level of Service	A	
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	16	28	11	110	157	7
Future Vol, veh/h	16	28	11	110	157	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	17	30	12	120	171	8

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	319	175	179	0	0
Stage 1	175	-	-	-	-
Stage 2	144	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-
Pot Cap-1 Maneuver	672	866	1391	-	-
Stage 1	853	-	-	-	-
Stage 2	881	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	666	866	1391	-	-
Mov Cap-2 Maneuver	666	-	-	-	-
Stage 1	845	-	-	-	-
Stage 2	881	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	0.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1391	-	781	-	-
HCM Lane V/C Ratio	0.009	-	0.061	-	-
HCM Control Delay (s)	7.6	0	9.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	14	34	12	168	207	9
Future Volume (vph)	14	34	12	168	207	9
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	0.905			0.994		
Flt Protected	0.986			0.997		
Satd. Flow (prot)	1555	0	0	1738	1733	0
Flt Permitted	0.986			0.997		
Satd. Flow (perm)	1555	0	0	1738	1733	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	525			1031	566	
Travel Time (s)	11.9			23.4	12.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	9%	9%	9%	9%	9%	9%
Adj. Flow (vph)	15	36	13	179	220	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	51	0	0	192	230	0
Sign Control	Stop			Free	Free	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	28.7%
ICU Level of Service	A
Analysis Period (min)	15



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	14	34	12	168	207	9
Future Volume (Veh/h)	14	34	12	168	207	9
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	15	36	13	179	220	10
<b>Pedestrians</b>						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	430	225	230			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	430	225	230			
tC, single (s)	6.5	6.3	4.2			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.3			
p0 queue free %	97	95	99			
cM capacity (veh/h)	563	797	1298			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	51	192	230			
Volume Left	15	13	0			
Volume Right	36	0	10			
cSH	711	1298	1700			
Volume to Capacity	0.07	0.01	0.14			
Queue Length 95th (ft)	6	1	0			
Control Delay (s)	10.5	0.6	0.0			
Lane LOS	B	A				
Approach Delay (s)	10.5	0.6	0.0			
Approach LOS	B					
<b>Intersection Summary</b>						
Average Delay			1.4			
Intersection Capacity Utilization			28.7%	ICU Level of Service	A	
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	14	34	12	168	207	9
Future Vol, veh/h	14	34	12	168	207	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	9	9	9	9	9	9
Mvmt Flow	15	36	13	179	220	10

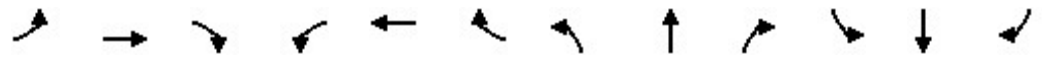
Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	430	225	230	0	0
Stage 1	225	-	-	-	-
Stage 2	205	-	-	-	-
Critical Hdwy	6.49	6.29	4.19	-	-
Critical Hdwy Stg 1	5.49	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-
Follow-up Hdwy	3.581	3.381	2.281	-	-
Pot Cap-1 Maneuver	569	797	1298	-	-
Stage 1	796	-	-	-	-
Stage 2	813	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	563	797	1298	-	-
Mov Cap-2 Maneuver	563	-	-	-	-
Stage 1	787	-	-	-	-
Stage 2	813	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.5	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1298	-	711	-	-
HCM Lane V/C Ratio	0.01	-	0.072	-	-
HCM Control Delay (s)	7.8	0	10.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Farmington Connectivity Study  
 29: Whispering Rod Rd/Chaffee Ln & W District Rd

Existing Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	90	0	12	72	23	2	0	17	22	1	19
Future Volume (vph)	27	90	0	12	72	23	2	0	17	22	1	19
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	1.00	1.00	1.00	1.00	1.00
Frt					0.971			0.881				0.939
Flt Protected		0.989			0.994			0.994				0.974
Satd. Flow (prot)	0	1807	0	0	1763	0	0	1600	0	0	1671	0
Flt Permitted		0.989			0.994			0.994				0.974
Satd. Flow (perm)	0	1807	0	0	1763	0	0	1600	0	0	1671	0
Link Speed (mph)		30			30			30				30
Link Distance (ft)		379			364			336				296
Travel Time (s)		8.6			8.3			7.6				6.7
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	35	117	0	16	94	30	3	0	22	29	1	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	152	0	0	140	0	0	25	0	0	55	0
Sign Control		Stop			Stop			Stop				Stop

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	25.7% ICU Level of Service A
Analysis Period (min)	15

Farmington Connectivity Study  
 29: Whispering Rod Rd/Chaffee Ln & W District Rd

Existing Conditions  
 AM PEAK



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	27	90	0	12	72	23	2	0	17	22	1	19
Future Volume (vph)	27	90	0	12	72	23	2	0	17	22	1	19
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	35	117	0	16	94	30	3	0	22	29	1	25

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	152	140	25	55
Volume Left (vph)	35	16	3	29
Volume Right (vph)	0	30	22	25
Hadj (s)	0.11	-0.04	-0.44	-0.10
Departure Headway (s)	4.3	4.2	4.2	4.5
Degree Utilization, x	0.18	0.16	0.03	0.07
Capacity (veh/h)	808	833	794	743
Control Delay (s)	8.3	8.0	7.3	7.8
Approach Delay (s)	8.3	8.0	7.3	7.8
Approach LOS	A	A	A	A

Intersection Summary			
Delay		8.1	
Level of Service		A	
Intersection Capacity Utilization	25.7%		ICU Level of Service A
Analysis Period (min)		15	

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	27	90	0	12	72	23	2	0	17	22	1	19
Future Vol, veh/h	27	90	0	12	72	23	2	0	17	22	1	19
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	35	117	0	16	94	30	3	0	22	29	1	25
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.3	8	7.3	7.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	23%	11%	52%
Vol Thru, %	0%	77%	67%	2%
Vol Right, %	89%	0%	21%	45%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	19	117	107	42
LT Vol	2	27	12	22
Through Vol	0	90	72	1
RT Vol	17	0	23	19
Lane Flow Rate	25	152	139	55
Geometry Grp	1	1	1	1
Degree of Util (X)	0.029	0.18	0.159	0.068
Departure Headway (Hd)	4.159	4.258	4.114	4.473
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	865	831	857	805
Service Time	2.162	2.343	2.208	2.475
HCM Lane V/C Ratio	0.029	0.183	0.162	0.068
HCM Control Delay	7.3	8.3	8	7.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.7	0.6	0.2

Farmington Connectivity Study  
 1: Canton Rd (RT 179) & Spielman Hwy (RT 4)

2050 Scenario 1 (No Build) Conditions

PM Peak



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	292	444	576	494	323	370
Future Volume (vph)	292	444	576	494	323	370
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260	0	0			0
Storage Lanes	1	1	0			0
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	0.99	
Frt		0.850			0.928	
Flt Protected	0.950			0.974		
Satd. Flow (prot)	1787	1599	0	1832	1726	0
Flt Permitted	0.950			0.288		
Satd. Flow (perm)	1787	1599	0	542	1726	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		436			90	
Link Speed (mph)	35			50	50	
Link Distance (ft)	986			565	665	
Travel Time (s)	19.2			7.7	9.1	
Confl. Peds. (#/hr)			1			1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	298	453	588	504	330	378
Shared Lane Traffic (%)						
Lane Group Flow (vph)	298	453	0	1092	708	0
Number of Detectors	1	1	1	1	1	
Detector Template			Left			
Leading Detector (ft)	40	40	20	40	40	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	40	40	20	40	40	
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	pm+ov	D.P+P	NA	NA	
Protected Phases	4	1	1	12	2	
Permitted Phases		4	2			
Detector Phase	4	1	1	2	2	
Switch Phase						
Minimum Initial (s)	6.0	6.0	6.0		20.0	
Minimum Split (s)	17.0	10.0	10.0		26.6	
Total Split (s)	29.0	10.0	10.0		46.6	
Total Split (%)	33.9%	11.7%	11.7%		54.4%	
Maximum Green (s)	25.0	6.0	6.0		40.0	
Yellow Time (s)	3.0	3.0	3.0		5.0	
All-Red Time (s)	1.0	1.0	1.0		1.6	
Lost Time Adjust (s)	0.0	0.0			0.0	

Farmington Connectivity Study  
 1: Canton Rd (RT 179) & Spielman Hwy (RT 4)

2050 Scenario 1 (No Build) Conditions

PM Peak



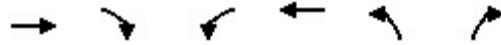
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Total Lost Time (s)	4.0	4.0			6.6	
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	1.0	3.0	3.0		5.0	
Recall Mode	None	Min	Min		Min	
Walk Time (s)	12.0					
Flash Dont Walk (s)	1.0					
Pedestrian Calls (#/hr)	1					
Act Effct Green (s)	16.2	26.2		48.8	40.2	
Actuated g/C Ratio	0.21	0.34		0.63	0.52	
v/c Ratio	0.80	0.55		2.46	0.75	
Control Delay	44.7	5.0		679.7	20.2	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	44.7	5.0		679.7	20.2	
LOS	D	A		F	C	
Approach Delay	20.7			679.7	20.2	
Approach LOS	C			F	C	
Queue Length 50th (ft)	136	5		~879	217	
Queue Length 95th (ft)	218	62		#1235	#493	
Internal Link Dist (ft)	906			485	585	
Turn Bay Length (ft)	260					
Base Capacity (vph)	582	831		444	943	
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	0.51	0.55		2.46	0.75	

Intersection Summary

Area Type: Other  
 Cycle Length: 85.6  
 Actuated Cycle Length: 77  
 Natural Cycle: 150  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 2.46  
 Intersection Signal Delay: 302.7  
 Intersection LOS: F  
 Intersection Capacity Utilization 125.9%  
 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.

Splits and Phases: 1: Canton Rd (RT 179) & Spielman Hwy (RT 4)





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	523	119	155	622	159	147
Future Volume (vph)	523	119	155	622	159	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	60
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.975					0.850
Flt Protected				0.990	0.950	
Satd. Flow (prot)	1834	0	0	1862	1787	1599
Flt Permitted				0.990	0.950	
Satd. Flow (perm)	1834	0	0	1862	1787	1599
Link Speed (mph)	30			30	25	
Link Distance (ft)	740			816	860	
Travel Time (s)	16.8			18.5	23.5	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	534	121	158	635	162	150
Shared Lane Traffic (%)						
Lane Group Flow (vph)	655	0	0	793	162	150
Sign Control	Free			Free	Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	94.9%
ICU Level of Service	F
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	43.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	523	119	155	622	159	147
Future Vol, veh/h	523	119	155	622	159	147
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	60
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	534	121	158	635	162	150

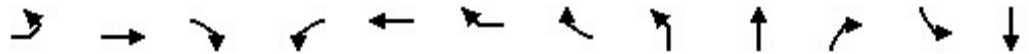
Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	655	0	1546
Stage 1	-	-	-	-	595
Stage 2	-	-	-	-	951
Critical Hdwy	-	-	4.11	-	6.41
Critical Hdwy Stg 1	-	-	-	-	5.41
Critical Hdwy Stg 2	-	-	-	-	5.41
Follow-up Hdwy	-	-	2.209	-	3.509
Pot Cap-1 Maneuver	-	-	937	-	~ 127
Stage 1	-	-	-	-	553
Stage 2	-	-	-	-	377
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	937	-	~ 94
Mov Cap-2 Maneuver	-	-	-	-	~ 94
Stage 1	-	-	-	-	553
Stage 2	-	-	-	-	279

Approach	EB	WB	NB
HCM Control Delay, s	0	1.9	238.1
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	94	506	-	-	937	-
HCM Lane V/C Ratio	1.726	0.296	-	-	0.169	-
HCM Control Delay (s)	\$ 444.2	15.1	-	-	9.6	0
HCM Lane LOS	F	C	-	-	A	A
HCM 95th %tile Q(veh)	13.2	1.2	-	-	0.6	-

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

3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



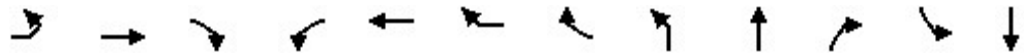
Lane Group	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↑↑			↑	↑		↑	↑	↑	↑	↑
Traffic Volume (vph)	5	105	21	258	42	479	70	195	237	355	115	293
Future Volume (vph)	5	105	21	258	42	479	70	195	237	355	115	293
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)			50	0		0		0		145	110	
Storage Lanes			1	0		1		1		1	1	
Taper Length (ft)				25				25			50	
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95
Ped Bike Factor		1.00			1.00					0.99	1.00	
Frt		0.976				0.850				0.850		0.998
Flt Protected		0.998			0.959			0.950			0.950	
Satd. Flow (prot)	0	3440	0	0	1786	1583	0	1770	1863	1583	1770	1766
Flt Permitted		0.943			0.662			0.248			0.610	
Satd. Flow (perm)	0	3251	0	0	1232	1583	0	462	1863	1563	1132	1766
Right Turn on Red			No				No			Yes		
Satd. Flow (RTOR)										297		
Link Speed (mph)		25			30			25				35
Link Distance (ft)		761			292			461				785
Travel Time (s)		20.8			6.6			12.6				15.3
Confl. Peds. (#/hr)			1	1						2	2	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	5	106	21	261	42	484	71	197	239	359	116	296
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	132	0	0	303	555	0	197	239	359	116	301
Number of Detectors	1	1		1	1	1		1	0	0	1	1
Detector Template	Left			Left								
Leading Detector (ft)	20	44		20	44	44		44	0	0	44	206
Trailing Detector (ft)	0	-6		0	-6	-6		-6	0	0	-6	200
Detector 1 Position(ft)	0	-6		0	-6	-6		-6	0	0	-6	200
Detector 1 Size(ft)	20	50		20	50	50		50	6	20	50	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA		Perm	NA	pt+ov		D.P+P	NA	Free	Perm	NA
Protected Phases		4			4	4.5		1	1.2			2
Permitted Phases	4			4				2		Free	2	
Detector Phase	4	4		4	4	4		1	2		2	2
Switch Phase												
Minimum Initial (s)	9.0	9.0		9.0	9.0			5.0			15.0	15.0
Minimum Split (s)	14.0	14.0		14.0	14.0			9.0			21.0	21.0
Total Split (s)	34.0	34.0		34.0	34.0			17.0			22.0	22.0
Total Split (%)	27.4%	27.4%		27.4%	27.4%			13.7%			17.7%	17.7%
Maximum Green (s)	29.0	29.0		29.0	29.0			13.0			16.0	16.0
Yellow Time (s)	4.0	4.0		4.0	4.0			3.0			4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0			1.0			2.0	2.0
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)		5.0			5.0			4.0			6.0	6.0

3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



Lane Group	SBR	SBR2	SEL2	SEL	SER	SER2	Ø3
Lane Configurations							
Traffic Volume (vph)	4	11	7	474	134	4	
Future Volume (vph)	4	11	7	474	134	4	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	60			0	255		
Storage Lanes	1			1	1		
Taper Length (ft)				25			
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	
Ped Bike Factor				1.00			
Frt		0.850			0.850		
Flt Protected				0.950			
Satd. Flow (prot)	0	1504	0	1770	1583	0	
Flt Permitted				0.990			
Satd. Flow (perm)	0	1504	0	1841	1583	0	
Right Turn on Red		Yes				No	
Satd. Flow (RTOR)		185					
Link Speed (mph)				30			
Link Distance (ft)				820			
Travel Time (s)				18.6			
Confl. Peds. (#/hr)				2	1		
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	
Adj. Flow (vph)	4	11	7	479	135	4	
Shared Lane Traffic (%)		10%					
Lane Group Flow (vph)	0	10	0	486	139	0	
Number of Detectors		0	1	1	1		
Detector Template			Left				
Leading Detector (ft)		0	20	44	44		
Trailing Detector (ft)		0	0	-6	-6		
Detector 1 Position(ft)		0	0	-6	-6		
Detector 1 Size(ft)		20	20	50	50		
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		
Turn Type		Free	D,Pm	Prot	Prot		
Protected Phases				5	5	3	
Permitted Phases		Free	5				
Detector Phase			5	5	5		
Switch Phase							
Minimum Initial (s)			9.0	9.0	9.0	1.0	
Minimum Split (s)			14.0	14.0	14.0	23.0	
Total Split (s)			28.0	28.0	28.0	23.0	
Total Split (%)			22.6%	22.6%	22.6%	19%	
Maximum Green (s)			23.0	23.0	23.0	19.0	
Yellow Time (s)			4.0	4.0	4.0	4.0	
All-Red Time (s)			1.0	1.0	1.0	0.0	
Lost Time Adjust (s)				0.0	0.0		
Total Lost Time (s)				5.0	5.0		

3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)

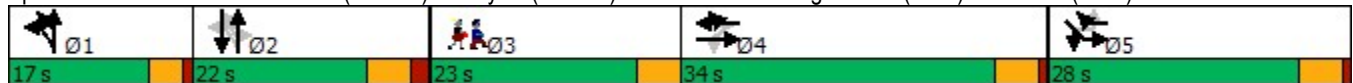


Lane Group	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lead/Lag	Lag	Lag		Lag	Lag			Lead			Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes			Yes			Yes	Yes
Vehicle Extension (s)	1.5	1.5		1.5	1.5			1.5			2.5	2.5
Recall Mode	None	None		None	None			None			Min	Min
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	29.2			29.2		57.5		30.0	34.1	104.5	16.1	16.1
Actuated g/C Ratio	0.28			0.28		0.55		0.29	0.33	1.00	0.15	0.15
v/c Ratio	0.15			0.88		0.64		0.70	0.39	0.23	0.67	1.11
Control Delay	30.8			64.2		22.5		43.3	30.9	0.3	63.1	128.5
Queue Delay	0.0			0.0		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	30.8			64.2		22.5		43.3	30.9	0.3	63.1	128.5
LOS	C			E		C		D	C	A	E	F
Approach Delay	30.8			37.3				20.2				107.7
Approach LOS	C			D				C				F
Queue Length 50th (ft)	33			184		226		92	114	0	71	~228
Queue Length 95th (ft)	73			#445		516		#214	238	0	#195	#520
Internal Link Dist (ft)	681			212				381				705
Turn Bay Length (ft)										145	110	
Base Capacity (vph)	909			344		870		302	607	1563	174	272
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	0.15			0.88		0.64		0.65	0.39	0.23	0.67	1.11

Intersection Summary

Area Type: Other  
 Cycle Length: 124  
 Actuated Cycle Length: 104.5  
 Natural Cycle: 145  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.19  
 Intersection Signal Delay: 61.4  
 Intersection LOS: E  
 Intersection Capacity Utilization 98.2%  
 ICU Level of Service F  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



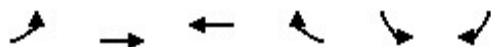


Lane Group	SBR	SBR2	SEL2	SEL	SER	SER2	Ø3
Lead/Lag							Lead
Lead-Lag Optimize?							Yes
Vehicle Extension (s)			1.5	1.5	1.5		3.0
Recall Mode			None	None	None		None
Walk Time (s)							7.0
Flash Dont Walk (s)							12.0
Pedestrian Calls (#/hr)							3
Act Effct Green (s)	104.5		23.2	23.2			
Actuated g/C Ratio	1.00		0.22	0.22			
v/c Ratio	0.01		1.19	0.40			
Control Delay	0.0		145.0	40.8			
Queue Delay	0.0		0.0	0.0			
Total Delay	0.0		145.0	40.8			
LOS		A		F		D	
Approach Delay				121.8			
Approach LOS				F			
Queue Length 50th (ft)		0		~373		76	
Queue Length 95th (ft)		0		#737		168	
Internal Link Dist (ft)				740			
Turn Bay Length (ft)		60				255	
Base Capacity (vph)		1504		408		351	
Starvation Cap Reductn		0		0		0	
Spillback Cap Reductn		0		0		0	
Storage Cap Reductn		0		0		0	
Reduced v/c Ratio		0.01		1.19		0.40	
<b>Intersection Summary</b>							

Farmington Connectivity Study  
4: Farmington Ave (RT 4) & W Avon Rd (RT 167)

2050 Scenario 1 (No Build) Conditions

PM Peak

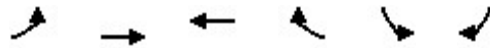


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3
Lane Configurations							
Traffic Volume (vph)	245	791	435	40	58	163	
Future Volume (vph)	245	791	435	40	58	163	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	365			0	0	0	
Storage Lanes	1			0	1	0	
Taper Length (ft)	50				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt			0.989		0.900		
Flt Protected	0.950				0.987		
Satd. Flow (prot)	1787	1881	1860	0	1671	0	
Flt Permitted	0.377				0.987		
Satd. Flow (perm)	709	1881	1860	0	1671	0	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			4		91		
Link Speed (mph)		30	35		30		
Link Distance (ft)		1079	965		1192		
Travel Time (s)		24.5	18.8		27.1		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	
Adj. Flow (vph)	250	807	444	41	59	166	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	250	807	485	0	225	0	
Number of Detectors	1	2	2		1		
Detector Template							
Leading Detector (ft)	24	246	246		24		
Trailing Detector (ft)	-6	120	120		-6		
Detector 1 Position(ft)	-6	120	120		-6		
Detector 1 Size(ft)	30	6	6		30		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		
Detector 2 Position(ft)		240	240				
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.P+P	NA	NA		Prot		
Protected Phases	1	1 2	2		4	3	
Permitted Phases	2						
Detector Phase	1	2	2		4		
Switch Phase							
Minimum Initial (s)	5.0		15.0		7.0	1.0	
Minimum Split (s)	9.5		22.5		22.5	23.0	
Total Split (s)	19.0		65.5		27.0	23.0	
Total Split (%)	14.1%		48.7%		20.1%	17%	
Maximum Green (s)	15.0		60.0		23.0	19.0	

Farmington Connectivity Study  
 4: Farmington Ave (RT 4) & W Avon Rd (RT 167)

2050 Scenario 1 (No Build) Conditions

PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3
Yellow Time (s)	3.0		4.0		3.0		4.0
All-Red Time (s)	1.0		1.5		1.0		0.0
Lost Time Adjust (s)	0.0		0.0		0.0		
Total Lost Time (s)	4.0		5.5		4.0		
Lead/Lag	Lead		Lag		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	1.5		2.5		2.0		3.0
Recall Mode	None		Min		None		None
Walk Time (s)							7.0
Flash Dont Walk (s)							11.0
Pedestrian Calls (#/hr)							0
Act Effct Green (s)	41.3	45.7	31.3		12.2		
Actuated g/C Ratio	0.62	0.69	0.47		0.18		
v/c Ratio	0.44	0.63	0.55		0.59		
Control Delay	6.6	8.4	15.2		24.9		
Queue Delay	0.0	0.0	0.0		0.0		
Total Delay	6.6	8.4	15.2		24.9		
LOS	A	A	B		C		
Approach Delay		8.0	15.2		24.9		
Approach LOS		A	B		C		
Queue Length 50th (ft)	27	131	121		47		
Queue Length 95th (ft)	71	319	263		151		
Internal Link Dist (ft)		999	885		1112		
Turn Bay Length (ft)	365						
Base Capacity (vph)	751	1772	1608		689		
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	0.33	0.46	0.30		0.33		

Intersection Summary

Area Type:	Other
Cycle Length:	134.5
Actuated Cycle Length:	66.7
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.63
Intersection Signal Delay:	12.1
Intersection LOS:	B
Intersection Capacity Utilization:	63.4%
ICU Level of Service:	B
Analysis Period (min):	15

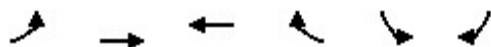
Splits and Phases: 4: Farmington Ave (RT 4) & W Avon Rd (RT 167)



Farmington Connectivity Study  
5: Farmington Ave (RT 4) & Monteith Dr

2050 Scenario 1 (No Build) Conditions

PM Peak

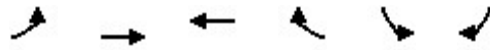


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø2	Ø3
Lane Configurations								
Traffic Volume (vph)	82	766	731	54	70	91		
Future Volume (vph)	82	766	731	54	70	91		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Frt			0.991			0.850		
Flt Protected		0.995			0.950			
Satd. Flow (prot)	0	1890	1883	0	1805	1615		
Flt Permitted		0.839			0.950			
Satd. Flow (perm)	0	1594	1883	0	1805	1615		
Right Turn on Red				Yes		Yes		
Satd. Flow (RTOR)			6			103		
Link Speed (mph)		35	35		25			
Link Distance (ft)		784	925		548			
Travel Time (s)		15.3	18.0		14.9			
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88		
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%		
Adj. Flow (vph)	93	870	831	61	80	103		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	963	892	0	80	103		
Number of Detectors	1	0	1		3	3		
Detector Template	Left							
Leading Detector (ft)	20	0	356		24	24		
Trailing Detector (ft)	0	0	350		-6	-6		
Detector 1 Position(ft)	0	0	350		-6	-6		
Detector 1 Size(ft)	20	6	6		6	6		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)					6	6		
Detector 2 Size(ft)					6	6		
Detector 2 Type					Cl+Ex	Cl+Ex		
Detector 2 Channel								
Detector 2 Extend (s)					0.0	0.0		
Detector 3 Position(ft)					18	18		
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	D.P+P	NA	NA		Prot	Perm		
Protected Phases	1	1 2 3	2 3		4		2	3
Permitted Phases	2 3					4		
Detector Phase	1	2	2		4	4		
Switch Phase								
Minimum Initial (s)	5.0				7.0	7.0	15.0	1.0
Minimum Split (s)	9.0				16.0	16.0	20.4	7.5
Total Split (s)	10.0				30.0	30.0	71.0	9.0

Farmington Connectivity Study  
 5: Farmington Ave (RT 4) & Monteith Dr

2050 Scenario 1 (No Build) Conditions

PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø2	Ø3
Total Split (%)	8.3%				25.0%	25.0%	59%	8%
Maximum Green (s)	6.0				26.0	26.0	65.6	2.5
Yellow Time (s)	3.0				3.0	3.0	4.4	4.4
All-Red Time (s)	1.0				1.0	1.0	1.0	2.1
Lost Time Adjust (s)					0.0	0.0		
Total Lost Time (s)					4.0	4.0		
Lead/Lag	Lead				Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes				Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0				1.5	1.5	3.0	3.0
Recall Mode	None				None	None	C-Max	None
Walk Time (s)					11.0	11.0		
Flash Dont Walk (s)					1.0	1.0		
Pedestrian Calls (#/hr)					0	0		
Act Effct Green (s)		102.3	100.9		9.7	9.7		
Actuated g/C Ratio		0.85	0.84		0.08	0.08		
v/c Ratio		0.71	0.56		0.55	0.46		
Control Delay		7.3	4.7		66.7	16.3		
Queue Delay		0.0	0.0		0.0	0.0		
Total Delay		7.3	4.7		66.7	16.3		
LOS		A	A		E	B		
Approach Delay		7.3	4.7		38.3			
Approach LOS		A	A		D			
Queue Length 50th (ft)		192	149		61	0		
Queue Length 95th (ft)		376	261		108	50		
Internal Link Dist (ft)		704	845		468			
Turn Bay Length (ft)								
Base Capacity (vph)		1358	1584		391	430		
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		0.71	0.56		0.20	0.24		

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 105 (88%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.71  
 Intersection Signal Delay: 8.9  
 Intersection LOS: A  
 Intersection Capacity Utilization 103.6%  
 ICU Level of Service G  
 Analysis Period (min) 15

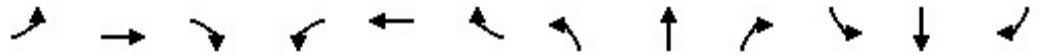
Splits and Phases: 5: Farmington Ave (RT 4) & Monteith Dr



Farmington Connectivity Study  
 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)

2050 Scenario 1 (No Build) Conditions

PM Peak



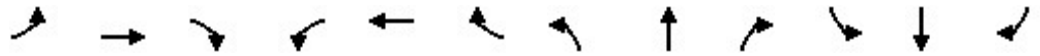
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	727	43	56	681	284	65	43	67	307	30	103
Future Volume (vph)	102	727	43	56	681	284	65	43	67	307	30	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90		0	90		90	0		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	65			110			25			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00				0.98		1.00		
Frt		0.992				0.850		0.908				0.884
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1846	0	1770	1863	1583	1770	1664	0	1770	1647	0
Flt Permitted	0.096			0.078			0.476			0.627		
Satd. Flow (perm)	179	1846	0	145	1863	1583	887	1664	0	1166	1647	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				175		51				108
Link Speed (mph)		40			40			30				35
Link Distance (ft)		635			779			428				768
Travel Time (s)		10.8			13.3			9.7				15.0
Confl. Peds. (#/hr)			1	1					1	1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	107	765	45	59	717	299	68	45	71	323	32	108
Shared Lane Traffic (%)												
Lane Group Flow (vph)	107	810	0	59	717	299	68	116	0	323	140	0
Number of Detectors	1	2		1	2	0	1	1		1	1	
Detector Template												
Leading Detector (ft)	45	342		45	342	0	55	50		50	60	
Trailing Detector (ft)	-5	190		-5	190	0	-5	-10		-10	-10	
Detector 1 Position(ft)	-5	190		-5	190	0	-5	-10		-10	-10	
Detector 1 Size(ft)	50	6		50	6	20	60	60		60	70	
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)		336			336							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	8		7	8	
Permitted Phases	6			2		2	8			8		
Detector Phase	1	6		5	2	2	7	8		7	8	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	5.0	7.0		5.0	7.0	
Minimum Split (s)	10.4	22.0		10.4	22.0	22.0	11.0	14.0		11.0	14.0	
Total Split (s)	15.0	46.0		15.0	46.0	46.0	29.0	16.0		29.0	16.0	
Total Split (%)	12.5%	38.3%		12.5%	38.3%	38.3%	24.2%	13.3%		24.2%	13.3%	

Lane Group	Ø9
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	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
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	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	14.0
Total Split (s)	14.0
Total Split (%)	12%

Farmington Connectivity Study  
 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)

2050 Scenario 1 (No Build) Conditions

PM Peak

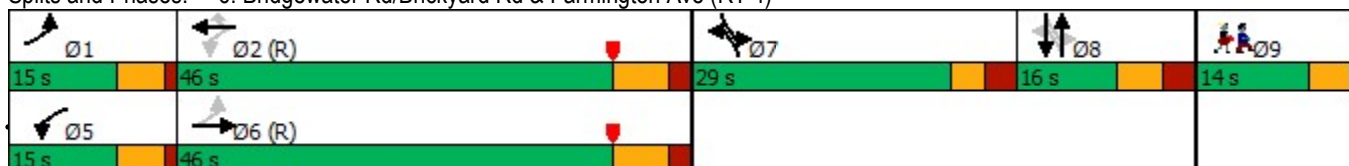


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	9.6	39.0		9.6	39.0	39.0	23.1	9.0		23.1	9.0	
Yellow Time (s)	4.4	5.0		4.4	5.0	5.0	3.0	4.1		3.0	4.1	
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	2.9	2.9		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	7.0		5.4	7.0	7.0	5.9	7.0		5.9	7.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effect Green (s)	66.3	58.0		62.9	54.7	54.7	30.5	8.4		30.5	8.4	
Actuated g/C Ratio	0.55	0.48		0.52	0.46	0.46	0.25	0.07		0.25	0.07	
v/c Ratio	0.53	0.91		0.36	0.84	0.37	0.18	0.71		0.80	0.65	
Control Delay	24.9	45.7		20.1	41.3	11.6	30.5	55.0		51.5	30.9	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	24.9	45.7		20.1	41.3	11.6	30.5	55.0		51.5	30.9	
LOS	C	D		C	D	B	C	E		D	C	
Approach Delay		43.3			31.9			46.0			45.3	
Approach LOS		D			C			D			D	
Queue Length 50th (ft)	35	576		19	479	55	37	49		206	24	
Queue Length 95th (ft)	88	#1060		50	#901	155	72	#132		302	91	
Internal Link Dist (ft)		555			699			348			688	
Turn Bay Length (ft)	90			90		90				150		
Base Capacity (vph)	227	893		209	849	816	409	172		430	224	
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	0.47	0.91		0.28	0.84	0.37	0.17	0.67		0.75	0.63	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 16 (13%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.91  
 Intersection Signal Delay: 39.2  
 Intersection LOS: D  
 Intersection Capacity Utilization 89.6%  
 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.

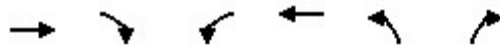
Splits and Phases: 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)



Lane Group	Ø9
Maximum Green (s)	10.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
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)	16.0
Pedestrian Calls (#/hr)	2
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	

Farmington Connectivity Study  
7: Garden St & Farmington Ave (RT 4)

2050 Scenario 1 (No Build) Conditions  
PM Peak



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø4
Lane Configurations	↑↑		↙	↑	↘			
Traffic Volume (vph)	1262	124	14	880	124	16		
Future Volume (vph)	1262	124	14	880	124	16		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)		0	200		0	0		
Storage Lanes		0	1		1	0		
Taper Length (ft)			50		25			
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00		
Ped Bike Factor	1.00		1.00		0.98			
Frt	0.987				0.985			
Flt Protected			0.950		0.958			
Satd. Flow (prot)	3520	0	1787	1881	1775	0		
Flt Permitted			0.138		0.958			
Satd. Flow (perm)	3520	0	259	1881	1747	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)	11				4			
Link Speed (mph)	30			30	25			
Link Distance (ft)	1042			566	488			
Travel Time (s)	23.7			12.9	13.3			
Confl. Peds. (#/hr)		6	6		5			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%		
Adj. Flow (vph)	1343	132	15	936	132	17		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	1475	0	15	936	149	0		
Number of Detectors	0		0	0	3			
Detector Template								
Leading Detector (ft)	0		0	0	24			
Trailing Detector (ft)	0		0	0	-6			
Detector 1 Position(ft)	0		0	0	-6			
Detector 1 Size(ft)	6		20	6	6			
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel								
Detector 1 Extend (s)	0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0		0.0	0.0	0.0			
Detector 2 Position(ft)					6			
Detector 2 Size(ft)					6			
Detector 2 Type					Cl+Ex			
Detector 2 Channel								
Detector 2 Extend (s)					0.0			
Detector 3 Position(ft)					18			
Detector 3 Size(ft)					6			
Detector 3 Type					Cl+Ex			
Detector 3 Channel								
Detector 3 Extend (s)					0.0			
Turn Type	NA		Perm	NA	Prot			
Protected Phases	2 4			2	5		3	4
Permitted Phases			2					

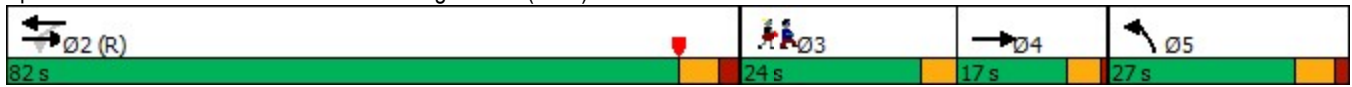


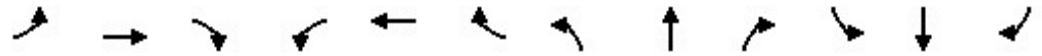
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø4
Detector Phase	2		2	2	5			
Switch Phase								
Minimum Initial (s)			15.0	15.0	7.0		7.0	6.0
Minimum Split (s)			22.1	22.1	13.3		24.0	10.8
Total Split (s)			82.0	82.0	27.0		24.0	17.0
Total Split (%)			54.7%	54.7%	18.0%		16%	11%
Maximum Green (s)			74.9	74.9	20.7		20.0	12.2
Yellow Time (s)			4.6	4.6	4.5		4.0	3.8
All-Red Time (s)			2.5	2.5	1.8		0.0	1.0
Lost Time Adjust (s)			0.0	0.0	0.0			
Total Lost Time (s)			7.1	7.1	6.3			
Lead/Lag							Lead	Lag
Lead-Lag Optimize?							Yes	Yes
Vehicle Extension (s)			3.0	3.0	1.5		3.0	1.5
Recall Mode			C-Max	C-Max	None		None	None
Walk Time (s)							7.0	
Flash Dont Walk (s)							13.0	
Pedestrian Calls (#/hr)							11	
Act Effct Green (s)	110.8		110.8	110.8	16.2			
Actuated g/C Ratio	0.74		0.74	0.74	0.11			
v/c Ratio	0.57		0.08	0.67	0.76			
Control Delay	12.5		2.4	7.1	87.0			
Queue Delay	0.1		0.0	0.6	0.0			
Total Delay	12.6		2.4	7.8	87.0			
LOS	B		A	A	F			
Approach Delay	12.6			7.7	87.0			
Approach LOS	B			A	F			
Queue Length 50th (ft)	216		1	39	140			
Queue Length 95th (ft)	579		m1	m79	210			
Internal Link Dist (ft)	962			486	408			
Turn Bay Length (ft)			200					
Base Capacity (vph)	2603		191	1389	252			
Starvation Cap Reductn	0		0	167	0			
Spillback Cap Reductn	293		0	0	0			
Storage Cap Reductn	0		0	0	0			
Reduced v/c Ratio	0.64		0.08	0.77	0.59			

**Intersection Summary**

Area Type: Other  
 Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 30 (20%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.76  
 Intersection Signal Delay: 15.1 Intersection LOS: B  
 Intersection Capacity Utilization 65.3% ICU Level of Service C  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

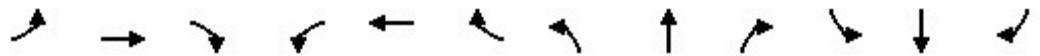
Splits and Phases: 7: Garden St & Farmington Ave (RT 4)





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1032	242	84	713	93	196	145	82	219	176	9
Future Volume (vph)	1	1032	242	84	713	93	196	145	82	219	176	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	255		0	100		50	0		0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (ft)	65			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor							0.99					1.00
Frt			0.850		0.983				0.850			0.997
Flt Protected	0.950			0.950			0.950					0.974
Satd. Flow (prot)	1787	3574	1599	1787	1849	0	1787	1881	1599	0	1825	0
Flt Permitted	0.089			0.080			0.950					0.974
Satd. Flow (perm)	167	3574	1599	150	1849	0	1775	1881	1599	0	1825	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30				30
Link Distance (ft)		566			848			677				693
Travel Time (s)		12.9			19.3			15.4				15.8
Confl. Peds. (#/hr)							2					2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	1	1053	247	86	728	95	200	148	84	223	180	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	1053	247	86	823	0	200	148	84	0	412	0
Number of Detectors	3	3	4	1	1		3	3	2	1	2	
Detector Template										Left		
Leading Detector (ft)	30	30	36	34	34		30	30	48	20	48	
Trailing Detector (ft)	0	0	-6	0	0		0	0	0	0	-6	
Detector 1 Position(ft)	0	0	-6	0	0		0	0	0	0	-6	
Detector 1 Size(ft)	6	6	6	34	34		6	6	12	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	12	12	6				12	12	18		6	
Detector 2 Size(ft)	6	6	6				6	6	30		42	
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0	0.0				0.0	0.0	0.0		0.0	
Detector 3 Position(ft)	24	24	18				24	24				
Detector 3 Size(ft)	6	6	6				6	6				
Detector 3 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex				
Detector 3 Channel												
Detector 3 Extend (s)	0.0	0.0	0.0				0.0	0.0				
Detector 4 Position(ft)			30									
Detector 4 Size(ft)			6									
Detector 4 Type			Cl+Ex									

Lane Group	Ø3
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)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Detector 4 Position(ft)	
Detector 4 Size(ft)	
Detector 4 Type	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 4 Channel												
Detector 4 Extend (s)	0.0											
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Split	NA	pt+ov	Split	NA	
Protected Phases	1	6		5	2		7	7	5 7	4	4	
Permitted Phases	6		6	2								
Detector Phase	1	6	6	5	2		7	7	7	4	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	7.0	20.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	9.5	27.3	27.3	12.0	27.3		13.0	13.0		22.5	22.5	
Total Split (s)	15.0	54.0	54.0	15.0	54.0		23.0	23.0		34.0	34.0	
Total Split (%)	10.0%	36.0%	36.0%	10.0%	36.0%		15.3%	15.3%		22.7%	22.7%	
Maximum Green (s)	11.0	46.7	46.7	10.0	46.7		17.0	17.0		28.3	28.3	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	2.8	2.8	2.0	2.8		3.0	3.0		2.7	2.7	
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	7.3	7.3	5.0	7.3		6.0	6.0				5.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag					Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None		None	None	
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										5.0	5.0	
Pedestrian Calls (#/hr)										2	2	
Act Effct Green (s)	56.6	48.3	48.3	64.0	59.9		20.8	20.8	35.2			43.7
Actuated g/C Ratio	0.38	0.32	0.32	0.43	0.40		0.14	0.14	0.23			0.29
v/c Ratio	0.01	0.91	0.48	0.55	1.12		0.81	0.57	0.22			0.78
Control Delay	14.0	49.3	32.1	46.0	110.4		85.7	69.4	47.7			59.9
Queue Delay	0.0	5.3	0.0	0.0	0.0		2.8	0.0	0.0			0.0
Total Delay	14.0	54.6	32.1	46.0	110.4		88.5	69.4	47.7			59.9
LOS	B	D	C	D	F		F	E	D			E
Approach Delay		50.3			104.3			74.0				59.9
Approach LOS		D			F			E				E
Queue Length 50th (ft)	1	522	195	54	~905		187	134	65			366
Queue Length 95th (ft)	m0	#671	221	m103	#1260		#369	#232	120			#702
Internal Link Dist (ft)		486			768			597				613
Turn Bay Length (ft)	100		150	255			100		50			
Base Capacity (vph)	188	1151	514	173	738		247	261	374			531
Starvation Cap Reductn	0	68	0	0	0		0	0	0			0
Spillback Cap Reductn	0	0	0	0	0		12	0	0			0
Storage Cap Reductn	0	0	0	0	0		0	0	0			0
Reduced v/c Ratio	0.01	0.97	0.48	0.50	1.12		0.85	0.57	0.22			0.78

Intersection Summary

Area Type: Other  
 Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 20 (13%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated

Lane Group	Ø3
Detector 4 Channel	
Detector 4 Extend (s)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	25.0
Total Split (s)	24.0
Total Split (%)	16%
Maximum Green (s)	20.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	13.0
Pedestrian Calls (#/hr)	2
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	

Maximum v/c Ratio: 1.12

Intersection Signal Delay: 71.0

Intersection LOS: E

Intersection Capacity Utilization 99.3%

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.

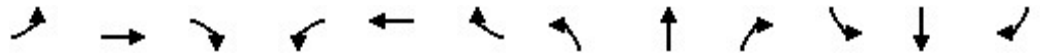
Splits and Phases: 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4)

 Ø1	 Ø2 (R)	 Ø3	 Ø4	 Ø7
15 s	54 s	24 s	34 s	23 s
 Ø5	 Ø6 (R)			
15 s	54 s			

Farmington Connectivity Study  
 9: High St/Backage Rd & Farmington Ave (RT 4)

2050 Scenario 1 (No Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	1309	45	48	847	5	77	1	76	6	3	3
Future Volume (vph)	7	1309	45	48	847	5	77	1	76	6	3	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	85		100	115		0	0		85	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	70			115			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			0.99	
Frt		0.995			0.999				0.850		0.966	
Flt Protected	0.950			0.950				0.953			0.976	
Satd. Flow (prot)	1770	3522	0	1770	1861	0	0	1775	1583	0	1745	0
Flt Permitted	0.237			0.139								
Satd. Flow (perm)	441	3522	0	259	1861	0	0	1856	1583	0	1784	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		3							85			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		848			473			291			375	
Travel Time (s)		19.3			10.8			6.6			8.5	
Confl. Peds. (#/hr)							1		1	1		1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	7	1364	47	50	882	5	80	1	79	6	3	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	1411	0	50	887	0	0	81	79	0	12	0
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template							Left			Left		
Leading Detector (ft)	40	40		25	25		20	35	35	20	30	
Trailing Detector (ft)	0	0		-10	-10		0	0	0	0	0	
Detector 1 Position(ft)	0	0		-10	-10		0	0	0	0	0	
Detector 1 Size(ft)	40	40		35	35		20	35	35	20	30	
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	pm+pt	NA		pm+pt	NA		D.P+P	NA	Prot	Perm	NA	
Protected Phases	1	6		5	2		4	4 7	4 7		7	
Permitted Phases	6			2			7			7		
Detector Phase	1	6		5	2		4	4	4	7	7	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		7.0			7.0	7.0	
Minimum Split (s)	9.0	21.7		9.0	21.7		11.7			12.0	12.0	
Total Split (s)	13.0	83.0		13.0	83.0		14.0			16.0	16.0	
Total Split (%)	8.7%	55.3%		8.7%	55.3%		9.3%			10.7%	10.7%	
Maximum Green (s)	9.0	76.3		9.0	76.3		9.3			11.0	11.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0			3.0	3.0	
All-Red Time (s)	1.0	2.2		1.0	2.2		1.7			2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	
Total Lost Time (s)	4.0	6.7		4.0	6.7						5.0	

Lane Group	Ø3
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	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	24.0
Total Split (s)	24.0
Total Split (%)	16%
Maximum Green (s)	20.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	

# Farmington Connectivity Study

## 9: High St/Backage Rd & Farmington Ave (RT 4)

2050 Scenario 1 (No Build) Conditions  
PM Peak

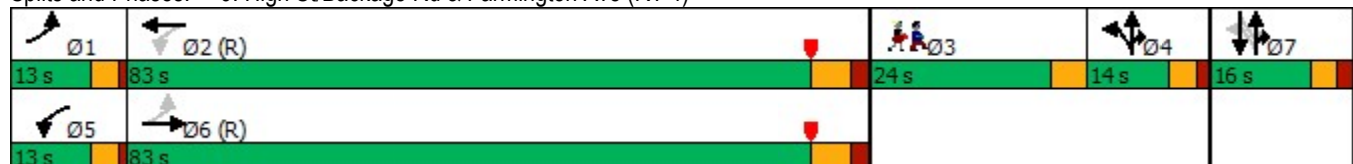


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag		Lead	Lag		Lag					
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes					
Vehicle Extension (s)	1.5	2.0		1.5	2.0		2.0			2.0	2.0	
Recall Mode	None	C-Min		None	C-Min		None			None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	118.3	111.6		121.6	117.5		14.5	14.5			7.2	
Actuated g/C Ratio	0.79	0.74		0.81	0.78		0.10	0.10			0.05	
v/c Ratio	0.02	0.54		0.19	0.61		0.45	0.34			0.14	
Control Delay	4.7	16.9		6.9	13.3		70.0	13.6			72.2	
Queue Delay	0.0	0.4		0.0	0.0		0.0	0.0			0.0	
Total Delay	4.7	17.4		6.9	13.3		70.0	13.6			72.2	
LOS	A	B		A	B		E	B			E	
Approach Delay		17.3			13.0		42.1				72.2	
Approach LOS		B			B		D				E	
Queue Length 50th (ft)	2	527		5	197		78	0			12	
Queue Length 95th (ft)	m1	m195		34	937		127	45			35	
Internal Link Dist (ft)		768			393		211				295	
Turn Bay Length (ft)	85			115				85				
Base Capacity (vph)	436	2620		301	1457		185	234			130	
Starvation Cap Reductn	0	638		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	0.02	0.71		0.17	0.61		0.44	0.34			0.09	

### Intersection Summary

Area Type: Other  
 Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 45 (30%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.61  
 Intersection Signal Delay: 17.5 Intersection LOS: B  
 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.

### Splits and Phases: 9: High St/Backage Rd & Farmington Ave (RT 4)

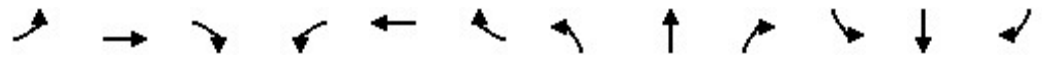


Lane Group	Ø3
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	13.0
Pedestrian Calls (#/hr)	4
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 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	

Farmington Connectivity Study  
 10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd

2050 Scenario 1 (No Build) Conditions

PM Peak



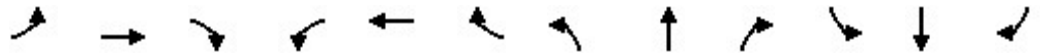
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	10	9	7	59	2	97	3	481	61	58	528	37
Future Volume (vph)	10	9	7	59	2	97	3	481	61	58	528	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00							
Frt		0.963			0.917			0.985			0.992	
Flt Protected		0.981			0.982						0.995	
Satd. Flow (prot)	0	1766	0	0	1694	0	0	1853	0	0	1857	0
Flt Permitted		0.891			0.864			0.997			0.929	
Satd. Flow (perm)	0	1604	0	0	1489	0	0	1847	0	0	1734	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			63			6			4	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		360			802			2590			707	
Travel Time (s)		8.2			18.2			44.1			12.1	
Confl. Peds. (#/hr)			1	1								
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	11	10	8	66	2	108	3	534	68	64	587	41
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	29	0	0	176	0	0	605	0	0	692	0
Number of Detectors	1	1		1	1		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	22		20	22		20	206		20	206	
Trailing Detector (ft)	0	-10		0	-10		0	100		0	100	
Detector 1 Position(ft)	0	-10		0	-10		0	100		0	100	
Detector 1 Size(ft)	20	32		20	32		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)								200			200	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		D.P+P	NA	
Protected Phases		4			4			2		1	12	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		1	1	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0		5.0		
Minimum Split (s)	12.0	12.0		12.0	12.0		21.6	21.6		9.0		
Total Split (s)	30.0	30.0		30.0	30.0		51.6	51.6		12.0		
Total Split (%)	26.0%	26.0%		26.0%	26.0%		44.6%	44.6%		10.4%		
Maximum Green (s)	25.0	25.0		25.0	25.0		45.0	45.0		8.0		
Yellow Time (s)	3.3	3.3		3.3	3.3		4.2	4.2		3.0		

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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)	
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	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	22.0
Total Split (s)	22.0
Total Split (%)	19%
Maximum Green (s)	18.0
Yellow Time (s)	4.0

Farmington Connectivity Study  
 10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd

2050 Scenario 1 (No Build) Conditions

PM Peak

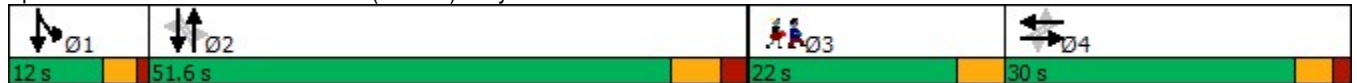


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	1.7	1.7		1.7	1.7		2.4	2.4		1.0		
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.0			5.0			6.6				
Lead/Lag	Lag	Lag		Lag	Lag		Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes		
Vehicle Extension (s)	1.5	1.5		1.5	1.5		2.5	2.5		3.0		
Recall Mode	None	None		None	None		Min	Min		None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		11.1			11.1			26.0				37.7
Actuated g/C Ratio		0.17			0.17			0.40				0.57
v/c Ratio		0.10			0.58			0.82				0.68
Control Delay		24.8			28.1			29.6				14.9
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		24.8			28.1			29.6				14.9
LOS		C			C			C				B
Approach Delay		24.8			28.1			29.6				14.9
Approach LOS		C			C			C				B
Queue Length 50th (ft)		6			35			170				98
Queue Length 95th (ft)		39			146			520				481
Internal Link Dist (ft)		280			722			2510				627
Turn Bay Length (ft)												
Base Capacity (vph)		676			660			1393				1011
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		0.04			0.27			0.43				0.68

Intersection Summary

Area Type:	Other
Cycle Length:	115.6
Actuated Cycle Length:	65.8
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.82
Intersection Signal Delay:	22.6
Intersection LOS:	C
Intersection Capacity Utilization:	87.4%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd



Lane Group	Ø3
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	1
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	

Farmington Connectivity Study  
 11: Harris Rd/W Avon Rd (RT 167) & W Avon Rd (RT167)

2050 Scenario 1 (No Build) Conditions

PM Peak



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	214	43	65	313	332	321
Future Volume (vph)	214	43	65	313	332	321
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	0.977			0.934		
Flt Protected	0.960			0.991		
Satd. Flow (prot)	1782	0	0	1883	1775	0
Flt Permitted	0.960			0.991		
Satd. Flow (perm)	1782	0	0	1883	1775	0
Link Speed (mph)	40			30	40	
Link Distance (ft)	781			809	2590	
Travel Time (s)	13.3			18.4	44.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	233	47	71	340	361	349
Shared Lane Traffic (%)						
Lane Group Flow (vph)	280	0	0	411	710	0
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	81.6%
ICU Level of Service	D
Analysis Period (min)	15

Intersection	
Intersection Delay, s/veh	44
Intersection LOS	E

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑	↑	
Traffic Vol, veh/h	214	43	65	313	332	321
Future Vol, veh/h	214	43	65	313	332	321
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	233	47	71	340	361	349
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	17.1	21	67.9
HCM LOS	C	C	F

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	17%	83%	0%
Vol Thru, %	83%	0%	51%
Vol Right, %	0%	17%	49%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	378	257	653
LT Vol	65	214	0
Through Vol	313	0	332
RT Vol	0	43	321
Lane Flow Rate	411	279	710
Geometry Grp	1	1	1
Degree of Util (X)	0.681	0.524	1.039
Departure Headway (Hd)	5.966	6.747	5.268
Convergence, Y/N	Yes	Yes	Yes
Cap	600	531	681
Service Time	4.066	4.843	3.352
HCM Lane V/C Ratio	0.685	0.525	1.043
HCM Control Delay	21	17.1	67.9
HCM Lane LOS	C	C	F
HCM 95th-tile Q	5.2	3	17.9



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	182	87	157	89	45	197
Future Volume (vph)	182	87	157	89	45	197
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			0.951		0.890	
Flt Protected		0.967			0.991	
Satd. Flow (prot)	0	1837	1807	0	1676	0
Flt Permitted		0.967			0.991	
Satd. Flow (perm)	0	1837	1807	0	1676	0
Link Speed (mph)		30	30		25	
Link Distance (ft)		546	304		789	
Travel Time (s)		12.4	6.9		21.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	202	97	174	99	50	219
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	299	273	0	269	0
Sign Control		Free	Free		Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	53.0%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	6.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↔		↕	
Traffic Vol, veh/h	182	87	157	89	45	197
Future Vol, veh/h	182	87	157	89	45	197
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	202	97	174	99	50	219

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	273	0	0	725	224
Stage 1	-	-	-	224	-
Stage 2	-	-	-	501	-
Critical Hdwy	4.1	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	3.5	3.3
Pot Cap-1 Maneuver	1302	-	-	395	820
Stage 1	-	-	-	818	-
Stage 2	-	-	-	613	-
Platoon blocked, %		-	-		
Mov Cap-1 Maneuver	1302	-	-	330	820
Mov Cap-2 Maneuver	-	-	-	330	-
Stage 1	-	-	-	684	-
Stage 2	-	-	-	613	-

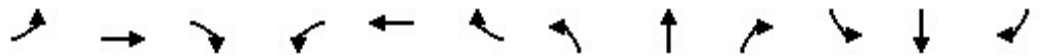
Approach	EB	WB	SB
HCM Control Delay, s	5.6	0	14.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1302	-	-	-	643
HCM Lane V/C Ratio	0.155	-	-	-	0.418
HCM Control Delay (s)	8.3	0	-	-	14.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.5	-	-	-	2.1

Farmington Connectivity Study  
13: Stafford Ave & Stevens St

2050 Scenario 1 (No Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	43	173	69	75	324	36	151	287	69	23	226	50
Future Volume (vph)	43	173	69	75	324	36	151	287	69	23	226	50
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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			1.00	
Frt		0.968			0.989			0.982			0.977	
Flt Protected		0.992			0.991			0.985			0.996	
Satd. Flow (prot)	0	1824	0	0	1862	0	0	1838	0	0	1842	0
Flt Permitted		0.892			0.891			0.660			0.942	
Satd. Flow (perm)	0	1641	0	0	1674	0	0	1231	0	0	1742	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		543			653			565			383	
Travel Time (s)		12.3			14.8			12.8			8.7	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	44	177	70	77	331	37	154	293	70	23	231	51
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	291	0	0	445	0	0	517	0	0	305	0
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	81		20	81		20	116		20	106	
Trailing Detector (ft)	0	75		0	75		0	110		0	100	
Detector 1 Position(ft)	0	75		0	75		0	110		0	100	
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	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	19.0	19.0		19.0	19.0		19.0	19.0		19.0	19.0	
Total Split (s)	34.0	34.0		34.0	34.0		29.0	29.0		29.0	29.0	
Total Split (%)	41.5%	41.5%		41.5%	41.5%		35.4%	35.4%		35.4%	35.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	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			4.0			4.0	
Lead/Lag							Lag	Lag		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	19.0
Total Split (s)	19.0
Total Split (%)	23%
Maximum Green (s)	17.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes



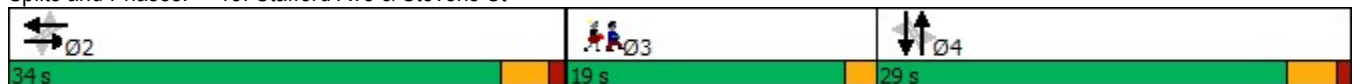
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	5.0	5.0		5.0	5.0		2.0	2.0		2.0	2.0	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	30.0				30.0		25.0				25.0	
Actuated g/C Ratio	0.37				0.37		0.30				0.30	
v/c Ratio	0.48				0.73		1.38				0.57	
Control Delay	23.4				30.8		213.6				29.2	
Queue Delay	0.0				0.0		0.0				0.0	
Total Delay	23.4				30.8		213.6				29.2	
LOS	C				C		F				C	
Approach Delay	23.4				30.8		213.6				29.2	
Approach LOS	C				C		F				C	
Queue Length 50th (ft)	113				194		~357				131	
Queue Length 95th (ft)	186				305		#543				213	
Internal Link Dist (ft)	463				573		485				303	
Turn Bay Length (ft)												
Base Capacity (vph)	600				612		375				531	
Starvation Cap Reductn	0				0		0				0	
Spillback Cap Reductn	0				0		0				0	
Storage Cap Reductn	0				0		0				0	
Reduced v/c Ratio	0.48				0.73		1.38				0.57	

Intersection Summary

Area Type: Other  
 Cycle Length: 82  
 Actuated Cycle Length: 82  
 Natural Cycle: 90  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 1.38  
 Intersection Signal Delay: 89.8  
 Intersection Capacity Utilization 86.6%  
 Analysis Period (min) 15  
 Intersection LOS: F  
 ICU Level of Service E

~ 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: 13: Stafford Ave & Stevens St























Lane Group	Ø3
Vehicle Extension (s)	3.0
Recall Mode	Ped
Walk Time (s)	7.0
Flash Dont Walk (s)	10.0
Pedestrian Calls (#/hr)	1
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

Farmington Connectivity Study  
 14: S Main St (RT 177) & Mill St

2050 Scenario 1 (No Build) Conditions

PM Peak

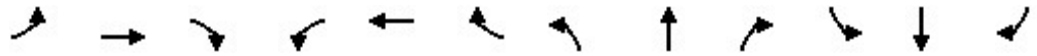
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	27	124	95	26	14	122	635	125	6	650	21
Future Volume (vph)	49	27	124	95	26	14	122	635	125	6	650	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		95	0		100	60		0	0		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
Frt			0.850			0.850		0.975			0.995	
Flt Protected		0.969			0.962		0.950			0.950		
Satd. Flow (prot)	0	1823	1599	0	1810	1599	1787	1834	0	1787	1872	0
Flt Permitted		0.677			0.716		0.208			0.240		
Satd. Flow (perm)	0	1274	1599	0	1347	1599	391	1834	0	451	1872	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			30			25			25	
Link Distance (ft)		906			356			584			461	
Travel Time (s)		24.7			8.1			15.9			12.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	54	30	138	106	29	16	136	706	139	7	722	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	84	138	0	135	16	136	845	0	7	745	0
Number of Detectors	1	1	1	1	1	1	1	0		0	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	50	50	20	40	40	50	0		0	0	
Trailing Detector (ft)	0	0	0	0	-10	-10	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	-10	-10	0	0		0	0	
Detector 1 Size(ft)	20	50	50	20	50	50	50	6		20	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	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	pm+ov	Perm	NA	Prot	D.P+P	NA		Perm	NA	
Protected Phases		4	2		4	4	2	1 2				1
Permitted Phases	4		4	4			1			1		
Detector Phase	4	4	2	4	4	4	2	2		1	1	
Switch Phase												
Minimum Initial (s)	6.0	6.0	5.0	6.0	6.0	6.0	5.0			25.0	25.0	
Minimum Split (s)	10.3	10.3	9.6	10.3	10.3	10.3	9.6			29.6	29.6	
Total Split (s)	21.3	21.3	15.6	21.3	21.3	21.3	15.6			49.6	49.6	
Total Split (%)	19.1%	19.1%	14.0%	19.1%	19.1%	19.1%	14.0%			44.5%	44.5%	
Maximum Green (s)	17.0	17.0	11.0	17.0	17.0	17.0	11.0			45.0	45.0	
Yellow Time (s)	3.2	3.2	3.6	3.2	3.2	3.2	3.6			3.6	3.6	
All-Red Time (s)	1.1	1.1	1.0	1.1	1.1	1.1	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)		4.3	4.6		4.3	4.3	4.6			4.6	4.6	
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag			Lead	Lead	

Lane Group	Ø3
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)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	25.0
Total Split (s)	25.0
Total Split (%)	22%
Maximum Green (s)	21.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead

Farmington Connectivity Study  
 14: S Main St (RT 177) & Mill St

2050 Scenario 1 (No Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5			3.0	3.0	
Recall Mode	None	None	None	None	None	None	None			Max	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		12.2	26.5		12.2	12.2	55.1	59.8		45.1	45.1	
Actuated g/C Ratio		0.15	0.33		0.15	0.15	0.68	0.74		0.56	0.56	
v/c Ratio		0.44	0.26		0.67	0.07	0.31	0.62		0.03	0.71	
Control Delay		38.6	21.0		48.7	29.5	8.3	8.3		10.2	19.0	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.7		0.0	3.4	
Total Delay		38.6	21.0		48.7	29.5	8.3	9.0		10.2	22.4	
LOS		D	C		D	C	A	A		B	C	
Approach Delay		27.7			46.7			8.9			22.3	
Approach LOS		C			D			A			C	
Queue Length 50th (ft)		39	51		66	7	16	169		2	264	
Queue Length 95th (ft)		82	93		124	24	37	331		9	458	
Internal Link Dist (ft)		826			276			504			381	
Turn Bay Length (ft)			95			100	60					
Base Capacity (vph)		268	488		283	337	461	1378		251	1044	
Starvation Cap Reductn		0	0		0	0	0	230		0	205	
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		0.31	0.28		0.48	0.05	0.30	0.74		0.03	0.89	

Intersection Summary

Area Type: Other

Cycle Length: 111.5

Actuated Cycle Length: 80.9

Natural Cycle: 110

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 18.4

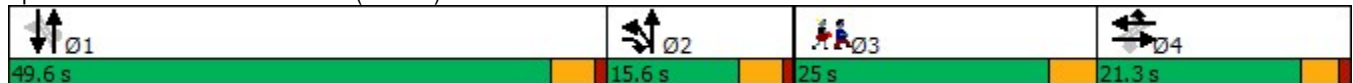
Intersection LOS: B

Intersection Capacity Utilization 86.4%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 14: S Main St (RT 177) & Mill St

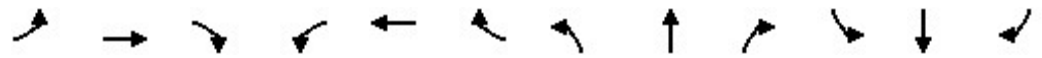


Lane Group	Ø3
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	14.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
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	
<b>Intersection Summary</b>	

Farmington Connectivity Study  
 15: S Main St (RT 177) & Railroad Ave/New Britain Ave

2050 Scenario 1 (No Build) Conditions

PM Peak



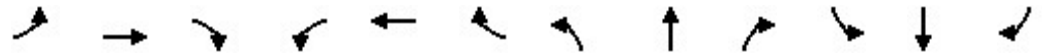
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (vph)	8	9	35	17	3	158	11	719	21	214	638	4
Future Volume (vph)	8	9	35	17	3	158	11	719	21	214	638	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		200	80		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			80			50		
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		0.97			0.98		1.00					1.00
Frt		0.910				0.850		0.996				0.999
Flt Protected		0.992			0.959		0.950			0.950		
Satd. Flow (prot)	0	1639	0	0	1804	1599	1787	1874	0	1787	1879	0
Flt Permitted		0.952			0.850		0.296			0.113		
Satd. Flow (perm)	0	1573	0	0	1565	1599	556	1874	0	213	1879	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			30			25				25
Link Distance (ft)		579			590			1222				584
Travel Time (s)		15.8			13.4			33.3				15.9
Confl. Peds. (#/hr)			5	5			3					3
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	9	10	38	19	3	174	12	790	23	235	701	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	57	0	0	22	174	12	813	0	235	705	0
Number of Detectors	1	1		1	1	1	0	2		1	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40	40	0	206		50	206	
Trailing Detector (ft)	0	-10		0	-10	-10	0	100		0	100	
Detector 1 Position(ft)	0	-10		0	-10	-10	0	100		0	100	
Detector 1 Size(ft)	20	50		20	50	50	20	6		50	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)								200			200	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		D.P+P	NA	
Protected Phases		4			4	2 4		1		2	1 2	
Permitted Phases	4			4			1			1		
Detector Phase	4	4		4	4	4	1	1		2	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		25.0	25.0		5.0		
Minimum Split (s)	10.2	10.2		10.2	10.2		29.6	29.6		9.6		
Total Split (s)	14.2	14.2		14.2	14.2		74.6	74.6		19.6		

Lane Group	Ø3
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)	
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	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	23.0
Total Split (s)	23.0

Farmington Connectivity Study  
 15: S Main St (RT 177) & Railroad Ave/New Britain Ave

2050 Scenario 1 (No Build) Conditions

PM Peak

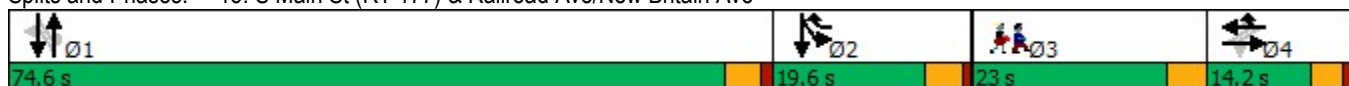


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	10.8%	10.8%		10.8%	10.8%		56.8%	56.8%		14.9%		
Maximum Green (s)	10.0	10.0		10.0	10.0		70.0	70.0		15.0		
Yellow Time (s)	3.2	3.2		3.2	3.2		3.6	3.6		3.6		
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0		
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0		
Total Lost Time (s)		4.2			4.2		4.6	4.6		4.6		
Lead/Lag	Lag	Lag		Lag	Lag		Lead	Lead		Lag		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes		
Vehicle Extension (s)	1.5	1.5		1.5	1.5		2.5	2.5		1.5		
Recall Mode	None	None		None	None		Min	Min		None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		8.1			8.1	23.6	40.2	40.2		51.5	56.7	
Actuated g/C Ratio		0.10			0.10	0.30	0.52	0.52		0.67	0.73	
v/c Ratio		0.35			0.13	0.36	0.04	0.83		0.63	0.51	
Control Delay		47.7			44.9	24.2	12.2	26.1		30.1	6.9	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.3	
Total Delay		47.7			44.9	24.2	12.2	26.1		30.1	7.2	
LOS		D			D	C	B	C		C	A	
Approach Delay		47.7			26.5			25.9			12.9	
Approach LOS		D			C			C			B	
Queue Length 50th (ft)		22			8	53	2	262		34	80	
Queue Length 95th (ft)		95			47	157	16	747		#200	379	
Internal Link Dist (ft)		499			510			1142			504	
Turn Bay Length (ft)						200	80			120		
Base Capacity (vph)		227			226	551	489	1647		498	1509	
Starvation Cap Reductn		0			0	0	0	0		0	287	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.25			0.10	0.32	0.02	0.49		0.47	0.58	

Intersection Summary

Area Type: Other  
 Cycle Length: 131.4  
 Actuated Cycle Length: 77.4  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.83  
 Intersection Signal Delay: 20.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 75.9%  
 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: 15: S Main St (RT 177) & Railroad Ave/New Britain Ave



Lane Group	Ø3
Total Split (%)	18%
Maximum Green (s)	19.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	11
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	34	57	85	780	854	61
Future Volume (vph)	34	57	85	780	854	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.915				0.991	
Flt Protected	0.982			0.995		
Satd. Flow (prot)	1690	0	0	1872	1864	0
Flt Permitted	0.982			0.995		
Satd. Flow (perm)	1690	0	0	1872	1864	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	805			584	1222	
Travel Time (s)	22.0			15.9	33.3	
Confl. Peds. (#/hr)			2			2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	35	59	89	813	890	64
Shared Lane Traffic (%)						
Lane Group Flow (vph)	94	0	0	902	954	0
Sign Control	Stop			Free	Free	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	109.8%
ICU Level of Service	H
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	5.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	34	57	85	780	854	61
Future Vol, veh/h	34	57	85	780	854	61
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	35	59	89	813	890	64

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1915	924	956	0	-	0
Stage 1	924	-	-	-	-	-
Stage 2	991	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	75	328	723	-	-	-
Stage 1	388	-	-	-	-	-
Stage 2	361	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	58	327	722	-	-	-
Mov Cap-2 Maneuver	58	-	-	-	-	-
Stage 1	300	-	-	-	-	-
Stage 2	360	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	101.3	1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	722	-	120	-	-
HCM Lane V/C Ratio	0.123	-	0.79	-	-
HCM Control Delay (s)	10.7	0	101.3	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	0.4	-	4.6	-	-

Farmington Connectivity Study  
 17: Plainville Ave (RT 177) & Coopermine Rd

2050 Scenario 1 (No Build) Conditions

PM Peak

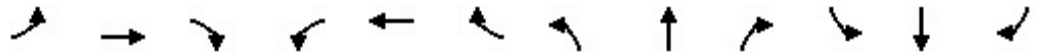


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	146	54	30	50	104	53	85	850	59	33	599	191
Future Volume (vph)	146	54	30	50	104	53	85	850	59	33	599	191
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.982			0.965			0.992			0.969	
Fl <sub>t</sub> Protected		0.969			0.988			0.996			0.998	
Satd. Flow (prot)	0	1790	0	0	1794	0	0	1859	0	0	1819	0
Fl <sub>t</sub> Permitted		0.602			0.873			0.863			0.932	
Satd. Flow (perm)	0	1112	0	0	1585	0	0	1610	0	0	1699	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			17			5			23	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		498			472			529			491	
Travel Time (s)		9.7			9.2			10.3			9.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	151	56	31	52	107	55	88	876	61	34	618	197
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	238	0	0	214	0	0	1025	0	0	849	0
Number of Detectors	1	3		1	3		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	24		20	24		20	361		20	361	
Trailing Detector (ft)	0	-10		0	-10		0	185		0	185	
Detector 1 Position(ft)	0	-10		0	-10		0	185		0	185	
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)		6			6			355			355	
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	
Detector 3 Position(ft)		18			18							
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	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	20.5	20.5		20.5	20.5		21.9	21.9		21.9	21.9	
Total Split (s)	40.5	40.5		40.5	40.5		66.9	66.9		66.9	66.9	

Farmington Connectivity Study  
 17: Plainville Ave (RT 177) & Coopermine Rd

2050 Scenario 1 (No Build) Conditions

PM Peak

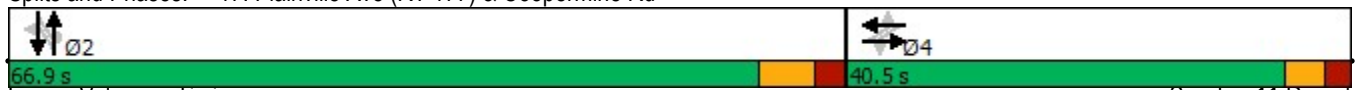


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	37.7%	37.7%		37.7%	37.7%		62.3%	62.3%		62.3%	62.3%	
Maximum Green (s)	35.0	35.0		35.0	35.0		60.0	60.0		60.0	60.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		4.4	4.4		4.4	4.4	
All-Red Time (s)	2.2	2.2		2.2	2.2		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.5			5.5			6.9			6.9	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5		1.5	1.5		5.0	5.0		5.0	5.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	14.0	14.0		14.0	14.0							
Flash Dont Walk (s)	1.0	1.0		1.0	1.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		22.6			22.6			60.4			60.4	
Actuated g/C Ratio		0.24			0.24			0.63			0.63	
v/c Ratio		0.89			0.55			1.00			0.78	
Control Delay		66.3			34.2			50.1			21.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		66.3			34.2			50.1			21.1	
LOS		E			C			D			C	
Approach Delay		66.3			34.2			50.1			21.1	
Approach LOS		E			C			D			C	
Queue Length 50th (ft)		135			104			~574			330	
Queue Length 95th (ft)		227			173			#1079			#762	
Internal Link Dist (ft)		418			392			449			411	
Turn Bay Length (ft)												
Base Capacity (vph)		414			595			1020			1083	
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		0.57			0.36			1.00			0.78	

Intersection Summary

Area Type: Other  
 Cycle Length: 107.4  
 Actuated Cycle Length: 95.5  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.00  
 Intersection Signal Delay: 39.7  
 Intersection LOS: D  
 Intersection Capacity Utilization 121.3%  
 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.

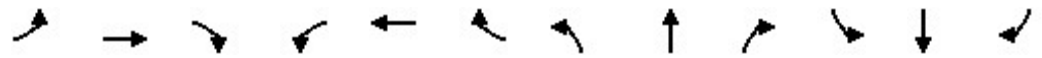
Splits and Phases: 17: Plainville Ave (RT 177) & Coopermine Rd



Farmington Connectivity Study  
 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd

2050 Scenario 1 (No Build) Conditions

PM Peak

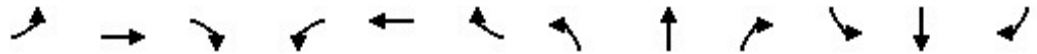


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (vph)	30	91	151	38	201	93	303	964	25	61	607	51
Future Volume (vph)	30	91	151	38	201	93	303	964	25	61	607	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	250		0	80		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			100			40		
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			0.962			0.996			0.988	
Flt Protected		0.994			0.994		0.950			0.950		
Satd. Flow (prot)	0	1730	0	0	1799	0	1787	1874	0	1787	1859	0
Flt Permitted		0.877			0.892		0.191			0.078		
Satd. Flow (perm)	0	1526	0	0	1614	0	359	1874	0	147	1859	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					15			2			5	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		594			761			713			527	
Travel Time (s)		13.5			17.3			10.8			8.0	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	31	93	154	39	205	95	309	984	26	62	619	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	278	0	0	339	0	309	1010	0	62	671	0
Number of Detectors	1	3		1	2		3	1		3	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	18		20	12		24	356		24	206	
Trailing Detector (ft)	0	-10		0	-6		-6	350		-6	200	
Detector 1 Position(ft)	0	-10		0	-6		-6	350		-6	200	
Detector 1 Size(ft)	20	6		20	6		6	6		6	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)		0			6		6			6		
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		
Detector 3 Position(ft)		12					18			18		
Detector 3 Size(ft)		6					6			6		
Detector 3 Type		Cl+Ex					Cl+Ex			Cl+Ex		
Detector 3 Channel												
Detector 3 Extend (s)		0.0					0.0			0.0		
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		5	2		1	6	
Switch Phase												

Farmington Connectivity Study  
 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd

2050 Scenario 1 (No Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	7.0	7.0		7.0	7.0		3.0	30.0		3.0	30.0	
Minimum Split (s)	30.9	30.9		30.9	30.9		7.0	37.1		7.0	37.1	
Total Split (s)	34.9	34.9		34.9	34.9		19.0	67.1		12.0	67.1	
Total Split (%)	28.8%	28.8%		28.8%	28.8%		15.7%	55.5%		9.9%	55.5%	
Maximum Green (s)	30.0	30.0		30.0	30.0		15.0	60.0		8.0	60.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.0	4.4		3.0	4.4	
All-Red Time (s)	1.6	1.6		1.6	1.6		1.0	2.7		1.0	2.7	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.9			4.9		4.0	7.1		4.0	7.1	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)	25.0	25.0		25.0	25.0							
Flash Dont Walk (s)	1.0	1.0		1.0	1.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		26.1			26.1		69.7	58.8		59.1	49.8	
Actuated g/C Ratio		0.25			0.25		0.66	0.56		0.56	0.47	
v/c Ratio		0.73			0.82		0.76	0.96		0.35	0.76	
Control Delay		50.6			54.6		22.1	44.4		13.6	29.5	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		50.6			54.6		22.1	44.4		13.6	29.5	
LOS		D			D		C	D		B	C	
Approach Delay		50.6			54.6			39.2			28.2	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)		179			216		83	681		14	374	
Queue Length 95th (ft)		#318			#395		163	#1053		29	549	
Internal Link Dist (ft)		514			681			633			447	
Turn Bay Length (ft)							250			80		
Base Capacity (vph)		449			485		448	1232		214	1096	
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		0.62			0.70		0.69	0.82		0.29	0.61	

Intersection Summary

Area Type: Other  
 Cycle Length: 121  
 Actuated Cycle Length: 104.9  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.96  
 Intersection Signal Delay: 39.3  
 Intersection LOS: D  
 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.

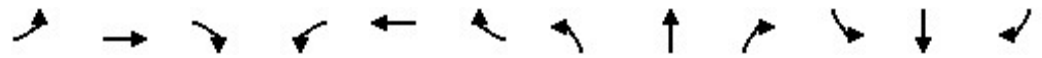
Splits and Phases: 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd



Farmington Connectivity Study  
 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)

2050 Scenario 1 (No Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	143	422	132	173	739	287	139	840	100	175	566	132
Future Volume (vph)	143	422	132	173	739	287	139	840	100	175	566	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260		260	180		0	250		250	165		165
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (ft)	190			170			150			115		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor				1.00						1.00		
Frt			0.850		0.958				0.850		0.972	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1881	1599	1787	3424	0	1787	1881	1599	1787	3474	0
Flt Permitted	0.950			0.950			0.216			0.088		
Satd. Flow (perm)	1787	1881	1599	1782	3424	0	406	1881	1599	166	3474	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			120		31				65			16
Link Speed (mph)		45			45			40				45
Link Distance (ft)		780			1567			643				474
Travel Time (s)		11.8			23.7			11.0				7.2
Confl. Peds. (#/hr)			2	2					1	1		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	146	431	135	177	754	293	142	857	102	179	578	135
Shared Lane Traffic (%)												
Lane Group Flow (vph)	146	431	135	177	1047	0	142	857	102	179	713	0
Number of Detectors	3	2	2	3	2		3	3	3	3	3	
Detector Template												
Leading Detector (ft)	24	306	306	24	306		24	24	24	24	24	
Trailing Detector (ft)	-6	150	150	-6	150		-6	-6	-6	-6	-6	
Detector 1 Position(ft)	-6	150	150	-6	150		-6	-6	-6	-6	-6	
Detector 1 Size(ft)	6	6	6	6	6		6	6	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	6	300	300	6	300		6	6	6	6	6	
Detector 2 Size(ft)	6	6	6	6	6		6	6	6	6	6	
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 3 Position(ft)	18			18			18	18	18	18	18	
Detector 3 Size(ft)	6			6			6	6	6	6	6	
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0	0.0	0.0	0.0	
Turn Type	Prot	NA	Prot	Prot	NA		pm+pt	NA	pt+ov	pm+pt	NA	
Protected Phases	1	6	6	5	2		3	8	5 8	7	4	
Permitted Phases							8			4		

Lane Group	Ø9
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)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	

Farmington Connectivity Study  
 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)

2050 Scenario 1 (No Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6	6	5	2		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0		5.0	9.0		5.0	9.0	
Minimum Split (s)	9.0	20.2	20.2	9.0	20.2		9.0	14.7		9.0	14.7	
Total Split (s)	25.0	35.2	35.2	25.0	45.2		22.0	50.7		14.0	45.7	
Total Split (%)	14.7%	20.7%	20.7%	14.7%	26.6%		12.9%	29.8%		8.2%	26.9%	
Maximum Green (s)	21.0	30.0	30.0	21.0	40.0		18.0	45.0		10.0	40.0	
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2		3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.2		1.0	1.2	
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)	4.0	5.2	5.2	4.0	5.2		4.0	5.7		4.0	5.7	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	2.5	2.5	1.5	2.5		2.0	3.0		2.0	2.0	
Recall Mode	None	Min	Min	None	Min		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	14.5	38.1	38.1	17.0	40.6		58.3	46.1	68.3	57.0	45.2	
Actuated g/C Ratio	0.11	0.28	0.28	0.13	0.30		0.43	0.34	0.50	0.42	0.33	
v/c Ratio	0.76	0.82	0.25	0.79	1.00		0.49	1.34	0.12	0.94	0.61	
Control Delay	85.8	60.3	11.1	82.8	73.8		30.9	199.6	6.7	84.2	42.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	85.8	60.3	11.1	82.8	73.8		30.9	199.6	6.7	84.2	42.4	
LOS	F	E	B	F	E		C	F	A	F	D	
Approach Delay		56.2			75.1			160.0			50.8	
Approach LOS		E			E			F			D	
Queue Length 50th (ft)	119	331	9	143	439		66	~910	14	96	248	
Queue Length 95th (ft)	240	#709	74	#322	#897		165	#1626	40	#368	479	
Internal Link Dist (ft)		700			1487			563			394	
Turn Bay Length (ft)	260		260	180			250		250	165		
Base Capacity (vph)	280	562	562	280	1045		371	675	827	191	1167	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.52	0.77	0.24	0.63	1.00		0.38	1.27	0.12	0.94	0.61	










Intersection Summary

Area Type: Other  
 Cycle Length: 169.9  
 Actuated Cycle Length: 135.6  
 Natural Cycle: 145  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.34  
 Intersection Signal Delay: 90.0  
 Intersection LOS: F  
 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.

Lane Group	Ø9
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	32.0
Total Split (s)	32.0
Total Split (%)	19%
Maximum Green (s)	28.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
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)	21.0
Pedestrian Calls (#/hr)	4
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	

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

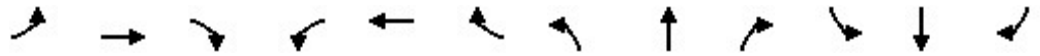
Splits and Phases: 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)

 Ø1	 Ø2	 Ø3	 Ø4	 Ø9
25 s	45.2 s	22 s	45.7 s	32 s
 Ø5	 Ø6	 Ø7	 Ø8	
25 s	35.2 s	14 s	50.7 s	

Farmington Connectivity Study  
 20: Unionville Ave (RT 177) & Northwest Dr

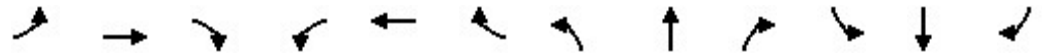
2050 Scenario 1 (No Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	106	114	244	247	150	130	953	68	79	589	16
Future Volume (vph)	34	106	114	244	247	150	130	953	68	79	589	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	210		0	260		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
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		0.922			0.943			0.990				0.996
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1717	0	1770	1757	0	1770	3504	0	1770	3523	0
Flt Permitted	0.415			0.387			0.238			0.163		
Satd. Flow (perm)	773	1717	0	721	1757	0	443	3504	0	304	3523	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35			22			5				2
Link Speed (mph)		35			35			40				40
Link Distance (ft)		710			592			572				675
Travel Time (s)		13.8			11.5			9.8				11.5
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	35	110	119	254	257	156	135	993	71	82	614	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	229	0	254	413	0	135	1064	0	82	631	0
Number of Detectors	3	3		3	3		3	2		3	2	
Detector Template												
Leading Detector (ft)	24	24		24	24		24	331		24	331	
Trailing Detector (ft)	-6	-6		-6	-6		-6	150		-6	150	
Detector 1 Position(ft)	-6	-6		-6	-6		-6	150		-6	150	
Detector 1 Size(ft)	6	6		6	6		6	6		6	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)	6	6		6	6		6	325		6	325	
Detector 2 Size(ft)	6	6		6	6		6	6		6	6	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 3 Position(ft)	18	18		18	18		18			18		
Detector 3 Size(ft)	6	6		6	6		6			6		
Detector 3 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex		
Detector 3 Channel												
Detector 3 Extend (s)	0.0	0.0		0.0	0.0		0.0			0.0		
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	

Lane Group	Ø9
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	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
<b>Switch Phase</b>												
Minimum Initial (s)	4.0	9.0		4.0	9.0		4.0	15.0		4.0	15.0	
Minimum Split (s)	8.0	15.2		8.0	15.2		8.0	22.5		8.0	22.5	
Total Split (s)	14.0	23.2		26.0	35.2		16.0	32.5		12.0	28.5	
Total Split (%)	10.9%	18.0%		20.2%	27.4%		12.4%	25.3%		9.3%	22.1%	
Maximum Green (s)	10.0	17.0		22.0	29.0		12.0	25.0		8.0	21.0	
Yellow Time (s)	3.0	4.1		3.0	4.1		3.0	4.8		3.0	4.8	
All-Red Time (s)	1.0	2.1		1.0	2.1		1.0	2.7		1.0	2.7	
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	6.2		4.0	6.2		4.0	7.5		4.0	7.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	3.0		1.5	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
<b>Walk Time (s)</b>												
<b>Flash Dont Walk (s)</b>												
<b>Pedestrian Calls (#/hr)</b>												
Act Effct Green (s)	26.3	18.0		37.7	29.6		38.0	27.5		33.7	23.5	
Actuated g/C Ratio	0.29	0.20		0.42	0.33		0.42	0.30		0.37	0.26	
v/c Ratio	0.12	0.62		0.56	0.70		0.44	1.00		0.37	0.69	
Control Delay	21.4	39.3		25.6	36.1		25.1	62.2		25.9	37.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	21.4	39.3		25.6	36.1		25.1	62.2		25.9	37.9	
LOS	C	D		C	D		C	E		C	D	
Approach Delay		36.9			32.1			58.0			36.5	
Approach LOS		D			C			E			D	
Queue Length 50th (ft)	10	91		85	187		44	~346		26	164	
Queue Length 95th (ft)	43	#315		238	#529		138	#799		90	#436	
Internal Link Dist (ft)		630			512			492			595	
Turn Bay Length (ft)							210			260		
Base Capacity (vph)	376	399		565	606		377	1066		253	914	
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	0.57		0.45	0.68		0.36	1.00		0.32	0.69	

**Intersection Summary**

Area Type: Other  
 Cycle Length: 128.7  
 Actuated Cycle Length: 90.6  
 Natural Cycle: 140  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.00  
 Intersection Signal Delay: 44.6  
 Intersection Capacity Utilization 77.0%  
 Analysis Period (min) 15  
 Intersection LOS: D  
 ICU Level of Service D

~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.

Lane Group	Ø9
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	35.0
Total Split (s)	35.0
Total Split (%)	27%
Maximum Green (s)	31.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
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)	24.0
Pedestrian Calls (#/hr)	1
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

Queue shown is maximum after two cycles.

Splits and Phases: 20: Unionville Ave (RT 177) & Northwest Dr

↙ Ø1	↓ Ø2	↘ Ø3	→ Ø4	🚶 Ø9
16 s	28.5 s	26 s	23.2 s	35 s
↙ Ø5	↑ Ø6	↗ Ø7	← Ø8	
12 s	32.5 s	14 s	35.2 s	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	152	46	27	208	155	136	207	23	182	113	6
Future Volume (vph)	10	152	46	27	208	155	136	207	23	182	113	6
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	1.00	1.00	1.00	1.00	1.00
Frt		0.970			0.946			0.992			0.997	
Flt Protected		0.998			0.997			0.982			0.971	
Satd. Flow (prot)	0	1803	0	0	1757	0	0	1815	0	0	1803	0
Flt Permitted		0.998			0.997			0.982			0.971	
Satd. Flow (perm)	0	1803	0	0	1757	0	0	1815	0	0	1803	0
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		506			528			2775			437	
Travel Time (s)		9.9			10.3			63.1			9.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	11	162	49	29	221	165	145	220	24	194	120	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	222	0	0	415	0	0	389	0	0	320	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	63.9%
ICU Level of Service	B
Analysis Period (min)	15

Intersection	
Intersection Delay, s/veh	30.8
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	152	46	27	208	155	136	207	23	182	113	6
Future Vol, veh/h	10	152	46	27	208	155	136	207	23	182	113	6
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	162	49	29	221	165	145	220	24	194	120	6
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	18.5	36.7	35.3	26.3
HCM LOS	C	E	E	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	37%	5%	7%	60%
Vol Thru, %	57%	73%	53%	38%
Vol Right, %	6%	22%	40%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	366	208	390	301
LT Vol	136	10	27	182
Through Vol	207	152	208	113
RT Vol	23	46	155	6
Lane Flow Rate	389	221	415	320
Geometry Grp	1	1	1	1
Degree of Util (X)	0.81	0.489	0.831	0.688
Departure Headway (Hd)	7.485	7.95	7.212	7.732
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	487	451	502	464
Service Time	5.516	6.037	5.242	5.811
HCM Lane V/C Ratio	0.799	0.49	0.827	0.69
HCM Control Delay	35.3	18.5	36.7	26.3
HCM Lane LOS	E	C	E	D
HCM 95th-tile Q	7.6	2.6	8.3	5.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	80	101	68	8	120	9	158	338	14	2	131	47
Future Volume (vph)	80	101	68	8	120	9	158	338	14	2	131	47
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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.963			0.991			0.996			0.965	
Flt Protected		0.984			0.997			0.985			0.999	
Satd. Flow (prot)	0	1765	0	0	1840	0	0	1827	0	0	1796	0
Flt Permitted		0.984			0.997			0.985			0.999	
Satd. Flow (perm)	0	1765	0	0	1840	0	0	1827	0	0	1796	0
Link Speed (mph)		30			35			30			30	
Link Distance (ft)		414			396			469			2775	
Travel Time (s)		9.4			7.7			10.7			63.1	
Confl. Peds. (#/hr)			14	14			8		17	17		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)	87	110	74	9	130	10	172	367	15	2	142	51
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	271	0	0	149	0	0	554	0	0	195	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	73.2%
Analysis Period (min)	15
	ICU Level of Service D

Intersection	
Intersection Delay, s/veh	26.2
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	80	101	68	8	120	9	158	338	14	2	131	47
Future Vol, veh/h	80	101	68	8	120	9	158	338	14	2	131	47
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	2	2	2	2	2	2	2	2	2
Mvmt Flow	87	110	74	9	130	10	172	367	15	2	142	51
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

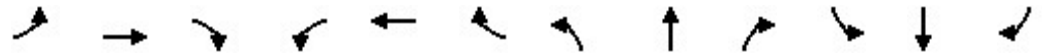
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	15.5	12.7	39.8	12.6
HCM LOS	C	B	E	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	31%	32%	6%	1%
Vol Thru, %	66%	41%	88%	73%
Vol Right, %	3%	27%	7%	26%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	510	249	137	180
LT Vol	158	80	8	2
Through Vol	338	101	120	131
RT Vol	14	68	9	47
Lane Flow Rate	554	271	149	196
Geometry Grp	1	1	1	1
Degree of Util (X)	0.899	0.486	0.284	0.342
Departure Headway (Hd)	5.84	6.464	6.863	6.295
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	626	555	521	569
Service Time	3.84	4.527	4.938	4.36
HCM Lane V/C Ratio	0.885	0.488	0.286	0.344
HCM Control Delay	39.8	15.5	12.7	12.6
HCM Lane LOS	E	C	B	B
HCM 95th-tile Q	11	2.6	1.2	1.5

Farmington Connectivity Study  
 23: New Britain Ave & Scott Swamp Rd (US 6)

2050 Scenario 1 (No Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	670	34	18	1048	330	30	122	14	136	111	39
Future Volume (vph)	42	670	34	18	1048	330	30	122	14	136	111	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	340		0	100		320	190		0	120		0
Storage Lanes	1		0	1		1	1		0	2		0
Taper Length (ft)	150			100			100			110		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.993				0.850		0.985			0.961	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3549	0	1787	3574	1599	1787	1853	0	3467	1808	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1787	3549	0	1787	3574	1599	1787	1853	0	3467	1808	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				355		6			19	
Link Speed (mph)		45			45			25			35	
Link Distance (ft)		3978			920			676			631	
Travel Time (s)		60.3			13.9			18.4			12.3	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	45	720	37	19	1127	355	32	131	15	146	119	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	757	0	19	1127	355	32	146	0	146	161	0
Number of Detectors	3	0		3	0	0	3	3		3	3	
Detector Template												
Leading Detector (ft)	24	0		24	0	0	24	24		24	24	
Trailing Detector (ft)	-10	0		-10	0	0	-6	-6		-6	-6	
Detector 1 Position(ft)	-10	0		-10	0	0	-6	-6		-6	-6	
Detector 1 Size(ft)	6	6		6	6	20	6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
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)	6			6			6	6		6	6	
Detector 2 Size(ft)	6			6			6	6		6	6	
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0		0.0	0.0	
Detector 3 Position(ft)	18			18			18	18		18	18	
Detector 3 Size(ft)	6			6			6	6		6	6	
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0		0.0	0.0	
Turn Type	Prot	NA		Prot	NA	pt+ov	Split	NA		Split	NA	
Protected Phases	1	6		5	2	2 7	8	8		7	7	
Permitted Phases												
Detector Phase	1	6		5	2	2	8	8		7	7	
Switch Phase												

Farmington Connectivity Study  
 23: New Britain Ave & Scott Swamp Rd (US 6)

2050 Scenario 1 (No Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0		7.0	7.0	
Minimum Split (s)	9.9	20.8		11.4	20.8		34.0	34.0		13.2	13.2	
Total Split (s)	15.0	28.0		15.0	28.0		18.0	18.0		19.0	19.0	
Total Split (%)	18.8%	35.0%		18.8%	35.0%		22.5%	22.5%		23.8%	23.8%	
Maximum Green (s)	10.1	22.2		8.6	22.2		12.0	12.0		12.8	12.8	
Yellow Time (s)	3.0	4.8		3.0	4.8		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.9	1.0		3.4	1.0		2.7	2.7		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.9	5.8		6.4	5.8		6.0	6.0		6.2	6.2	
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)							27.0	27.0				
Flash Dont Walk (s)							1.0	1.0				
Pedestrian Calls (#/hr)							0	0				
Act Effct Green (s)	6.7	36.6		5.7	34.2	50.8	9.9	9.9		10.4	10.4	
Actuated g/C Ratio	0.08	0.46		0.07	0.43	0.64	0.12	0.12		0.13	0.13	
v/c Ratio	0.30	0.47		0.15	0.74	0.31	0.15	0.62		0.32	0.64	
Control Delay	39.1	18.8		38.9	23.3	6.3	31.7	43.6		32.9	40.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	39.1	18.8		38.9	23.3	6.3	31.7	43.6		32.9	40.6	
LOS	D	B		D	C	A	C	D		C	D	
Approach Delay		19.9			19.5			41.4			36.9	
Approach LOS		B			B			D			D	
Queue Length 50th (ft)	22	115		10	285	33	14	67		34	68	
Queue Length 95th (ft)	51	237		m17	#468	169	38	122		59	125	
Internal Link Dist (ft)		3898			840			596			551	
Turn Bay Length (ft)	340			100		320	190			120		
Base Capacity (vph)	225	1625		192	1526	1144	268	283		554	305	
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	0.20	0.47		0.10	0.74	0.31	0.12	0.52		0.26	0.53	

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 55 (69%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 22.9 Intersection LOS: C  
 Intersection Capacity Utilization 63.0% 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.

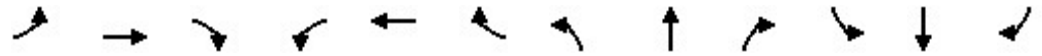
Splits and Phases: 23: New Britain Ave & Scott Swamp Rd (US 6)



Farmington Connectivity Study  
 24: Hyde Rd & Scott Swamp Rd (US 6)

2050 Scenario 1 (No Build) Conditions

PM Peak

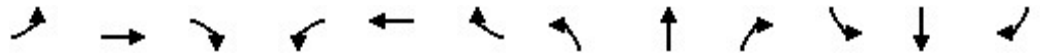


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	860	24	161	1274	3	13	0	238	14	7	10
Future Volume (vph)	2	860	24	161	1274	3	13	0	238	14	7	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		0	360		0	0		0	0		0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	100			65			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996							0.850			0.850
Flt Protected	0.950			0.950				0.950			0.968	
Satd. Flow (prot)	1787	3560	0	1787	3574	0	0	1787	1599	0	1821	1599
Flt Permitted	0.950			0.950				0.909			0.795	
Satd. Flow (perm)	1787	3560	0	1787	3574	0	0	1710	1599	0	1496	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5							84			113
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1090			523			762			370	
Travel Time (s)		16.5			7.9			20.8			10.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	2	945	26	177	1400	3	14	0	262	15	8	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	971	0	177	1403	0	0	14	262	0	23	11
Number of Detectors	3	0		3	0		1	3	3	1	3	3
Detector Template							Left			Left		
Leading Detector (ft)	24	0		24	0		20	24	24	20	24	24
Trailing Detector (ft)	-10	0		-10	0		0	-10	-10	0	-10	-10
Detector 1 Position(ft)	-10	0		-10	0		0	-10	-10	0	-10	-10
Detector 1 Size(ft)	6	6		6	6		20	6	6	20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	6			6			6	6	6		6	6
Detector 2 Size(ft)	6			6			6	6	6		6	6
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0	0.0		0.0	0.0
Detector 3 Position(ft)	18			18			18	18	18		18	18
Detector 3 Size(ft)	6			6			6	6	6		6	6
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	NA		Prot	NA		Perm	NA	pm+ov	Perm	NA	Perm
Protected Phases	1	6		5	2			4	5		4	
Permitted Phases							4		4	4		4
Detector Phase	1	6		5	2		4	4	5	4	4	4
Switch Phase												

Farmington Connectivity Study  
 24: Hyde Rd & Scott Swamp Rd (US 6)

2050 Scenario 1 (No Build) Conditions

PM Peak

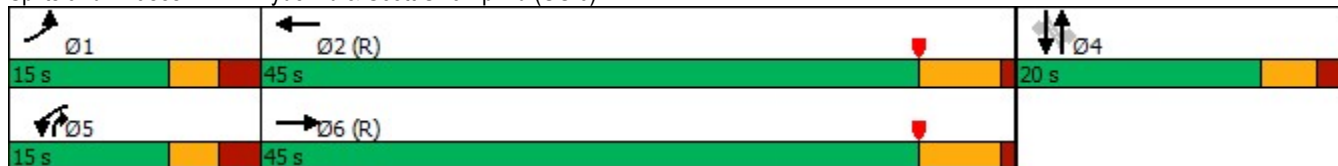


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0		7.0	7.0	5.0	7.0	7.0	7.0
Minimum Split (s)	10.5	21.8		10.5	21.8		30.5	30.5	10.5	30.5	30.5	30.5
Total Split (s)	15.0	45.0		15.0	45.0		20.0	20.0	15.0	20.0	20.0	20.0
Total Split (%)	18.8%	56.3%		18.8%	56.3%		25.0%	25.0%	18.8%	25.0%	25.0%	25.0%
Maximum Green (s)	9.5	39.2		9.5	39.2		14.5	14.5	9.5	14.5	14.5	14.5
Yellow Time (s)	3.0	4.8		3.0	4.8		3.3	3.3	3.0	3.3	3.3	3.3
All-Red Time (s)	2.5	1.0		2.5	1.0		2.2	2.2	2.5	2.2	2.2	2.2
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)	5.5	5.8		5.5	5.8		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	None
Walk Time (s)		15.0			15.0		24.0	24.0		24.0	24.0	24.0
Flash Dont Walk (s)		1.0			1.0		1.0	1.0		1.0	1.0	1.0
Pedestrian Calls (#/hr)		0			0		0	0		0	0	0
Act Effct Green (s)	5.0	47.9		13.1	66.7			7.2	20.8		7.2	7.2
Actuated g/C Ratio	0.06	0.60		0.16	0.83		0.09	0.26		0.09	0.09	0.09
v/c Ratio	0.02	0.46		0.60	0.47		0.09	0.55		0.17	0.17	0.04
Control Delay	51.5	8.1		40.2	3.5		34.8	19.7		36.8	36.8	0.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	51.5	8.1		40.2	3.5		34.8	19.7		36.8	36.8	0.3
LOS	D	A		D	A		C	B		D	D	A
Approach Delay		8.2			7.6		20.4				25.0	
Approach LOS		A			A		C				C	
Queue Length 50th (ft)	1	198		76	68		7	67		11	11	0
Queue Length 95th (ft)	m4	245		m129	193		24	124		33	33	0
Internal Link Dist (ft)		1010			443		682				290	
Turn Bay Length (ft)	130			360								
Base Capacity (vph)	212	2134		296	2980		309	480		271	271	382
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	0.46		0.60	0.47		0.05	0.55		0.08	0.08	0.03

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 27 (34%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.60  
 Intersection Signal Delay: 9.2 Intersection LOS: A  
 Intersection Capacity Utilization 61.3% ICU Level of Service B  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 24: Hyde Rd & Scott Swamp Rd (US 6)





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	
Traffic Volume (vph)	780	333	172	1093	338	40
Future Volume (vph)	780	333	172	1093	338	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		350	350		380	0
Storage Lanes		1	1		1	0
Taper Length (ft)			100		130	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	0.95
Frt		0.850			0.984	
Flt Protected			0.950		0.957	
Satd. Flow (prot)	3574	1599	1787	3574	3437	0
Flt Permitted			0.950		0.957	
Satd. Flow (perm)	3574	1599	1787	3574	3437	0
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			45	30	
Link Distance (ft)	1087			600	782	
Travel Time (s)	16.5			9.1	17.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	848	362	187	1188	367	43
Shared Lane Traffic (%)						
Lane Group Flow (vph)	848	362	187	1188	410	0
Number of Detectors	0	0	3	0	1	
Detector Template						
Leading Detector (ft)	0	0	24	0	56	
Trailing Detector (ft)	0	0	-10	0	50	
Detector 1 Position(ft)	0	0	-10	0	50	
Detector 1 Size(ft)	6	20	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)			6			
Detector 2 Size(ft)			6			
Detector 2 Type			Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)			0.0			
Detector 3 Position(ft)			18			
Detector 3 Size(ft)			6			
Detector 3 Type			Cl+Ex			
Detector 3 Channel						
Detector 3 Extend (s)			0.0			
Turn Type	NA	pm+ov	Prot	NA	Prot	
Protected Phases	2	3	1	12	3	
Permitted Phases		2				
Detector Phase	2	3	1	2	3	
Switch Phase						



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	15.0	7.0	5.0		7.0	
Minimum Split (s)	21.0	29.5	9.0		29.5	
Total Split (s)	45.0	20.0	15.0		20.0	
Total Split (%)	56.3%	25.0%	18.8%		25.0%	
Maximum Green (s)	39.0	14.5	11.0		14.5	
Yellow Time (s)	5.0	3.0	3.0		3.0	
All-Red Time (s)	1.0	2.5	1.0		2.5	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.0	5.5	4.0		5.5	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	2.0		3.0	
Recall Mode	C-Max	None	Min		None	
Walk Time (s)		23.0			23.0	
Flash Dont Walk (s)		1.0			1.0	
Pedestrian Calls (#/hr)		0			0	
Act Effct Green (s)	40.9	59.8	10.7	57.7	12.8	
Actuated g/C Ratio	0.51	0.75	0.13	0.72	0.16	
v/c Ratio	0.46	0.30	0.78	0.46	0.74	
Control Delay	18.2	2.3	57.3	5.6	40.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	18.2	2.3	57.3	5.6	40.7	
LOS	B	A	E	A	D	
Approach Delay	13.5			12.6	40.7	
Approach LOS	B			B	D	
Queue Length 50th (ft)	152	15	90	111	100	
Queue Length 95th (ft)	243	23	#191	153	145	
Internal Link Dist (ft)	1007			520	702	
Turn Bay Length (ft)		350	350		380	
Base Capacity (vph)	1829	1228	251	2575	622	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.46	0.29	0.75	0.46	0.66	

**Intersection Summary**

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 18 (23%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.78  
 Intersection Signal Delay: 16.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 54.9%  
 ICU Level of Service A  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 25: Scott Swamp Rd (RT 552) & Scott Swamp Rd (US 6)/Colt Hwy (US 6)





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3
Lane Configurations							
Traffic Volume (vph)	151	153	216	399	580	216	
Future Volume (vph)	151	153	216	399	580	216	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor				1.00	0.99		
Frt	0.932				0.963		
Flt Protected	0.976			0.983			
Satd. Flow (prot)	1711	0	0	1849	1798	0	
Flt Permitted	0.976			0.082			
Satd. Flow (perm)	1711	0	0	154	1798	0	
Right Turn on Red		No				Yes	
Satd. Flow (RTOR)					17		
Link Speed (mph)	30			30	30		
Link Distance (ft)	345			413	499		
Travel Time (s)	7.8			9.4	11.3		
Confl. Peds. (#/hr)			4			4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	
Adj. Flow (vph)	156	158	223	411	598	223	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	314	0	0	634	821	0	
Number of Detectors	2		1	1	1		
Detector Template			Left				
Leading Detector (ft)	18		20	206	206		
Trailing Detector (ft)	0		0	200	200		
Detector 1 Position(ft)	0		0	200	200		
Detector 1 Size(ft)	6		20	6	6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		
Detector 2 Position(ft)	12						
Detector 2 Size(ft)	6						
Detector 2 Type	Cl+Ex						
Detector 2 Channel							
Detector 2 Extend (s)	0.0						
Turn Type	Prot		D.P+P	NA	NA		
Protected Phases	4		1	12	2	3	
Permitted Phases			2				
Detector Phase	4		1	1	2		
Switch Phase							
Minimum Initial (s)	5.0		3.0		15.0	1.0	
Minimum Split (s)	9.0		7.0		22.2	25.0	
Total Split (s)	34.0		12.0		39.2	25.0	
Total Split (%)	30.9%		10.9%		35.6%	23%	
Maximum Green (s)	30.0		8.0		32.0	21.0	
Yellow Time (s)	3.0		3.0		4.1	4.0	

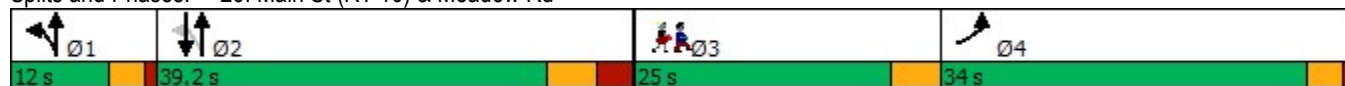


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3
All-Red Time (s)	1.0		1.0		3.1		0.0
Lost Time Adjust (s)	0.0				0.0		
Total Lost Time (s)	4.0				7.2		
Lead/Lag	Lag		Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	3.0		3.0		5.0		3.0
Recall Mode	None		Max		Min		None
Walk Time (s)							7.0
Flash Dont Walk (s)							14.0
Pedestrian Calls (#/hr)							6
Act Effct Green (s)	19.2			44.6	33.0		
Actuated g/C Ratio	0.24			0.56	0.41		
v/c Ratio	0.76			2.43	1.09		
Control Delay	41.9			673.4	85.8		
Queue Delay	0.0			0.0	0.0		
Total Delay	41.9			673.4	85.8		
LOS	D			F	F		
Approach Delay	41.9			673.4	85.8		
Approach LOS	D			F	F		
Queue Length 50th (ft)	132			~453	~407		
Queue Length 95th (ft)	299			#1000	#1057		
Internal Link Dist (ft)	265			333	419		
Turn Bay Length (ft)							
Base Capacity (vph)	663			261	753		
Starvation Cap Reductn	0			0	0		
Spillback Cap Reductn	0			0	0		
Storage Cap Reductn	0			0	0		
Reduced v/c Ratio	0.47			2.43	1.09		

Intersection Summary

Area Type: Other  
 Cycle Length: 110.2  
 Actuated Cycle Length: 79.8  
 Natural Cycle: 150  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 2.43  
 Intersection Signal Delay: 288.6  
 Intersection LOS: F  
 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.

Splits and Phases: 26: Main St (RT 10) & Meadow Rd





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	15	20	27	327	132	28
Future Volume (vph)	15	20	27	327	132	28
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	0.922				0.977	
Flt Protected	0.979			0.996		
Satd. Flow (prot)	1681	0	0	1855	1820	0
Flt Permitted	0.979			0.996		
Satd. Flow (perm)	1681	0	0	1855	1820	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	203			252	253	
Travel Time (s)	4.6			5.7	5.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	22	29	355	143	30
Shared Lane Traffic (%)						
Lane Group Flow (vph)	38	0	0	384	173	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	40.7%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	15	20	27	327	132	28
Future Vol, veh/h	15	20	27	327	132	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	22	29	355	143	30

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	571	158	173	0	0
Stage 1	158	-	-	-	-
Stage 2	413	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	482	887	1404	-	-
Stage 1	871	-	-	-	-
Stage 2	668	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	469	887	1404	-	-
Mov Cap-2 Maneuver	469	-	-	-	-
Stage 1	848	-	-	-	-
Stage 2	668	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1404	-	642	-	-
HCM Lane V/C Ratio	0.021	-	0.059	-	-
HCM Control Delay (s)	7.6	0	11	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	16	18	42	379	223	28
Future Volume (vph)	16	18	42	379	223	28
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	0.927				0.985	
Flt Protected	0.978			0.995		
Satd. Flow (prot)	1689	0	0	1853	1835	0
Flt Permitted	0.978			0.995		
Satd. Flow (perm)	1689	0	0	1853	1835	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	463			170	320	
Travel Time (s)	10.5			3.9	7.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	20	46	412	242	30
Shared Lane Traffic (%)						
Lane Group Flow (vph)	37	0	0	458	272	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	49.0%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	16	18	42	379	223	28
Future Vol, veh/h	16	18	42	379	223	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	20	46	412	242	30

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	761	257	272	0	0
Stage 1	257	-	-	-	-
Stage 2	504	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	373	782	1291	-	-
Stage 1	786	-	-	-	-
Stage 2	607	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	356	782	1291	-	-
Mov Cap-2 Maneuver	356	-	-	-	-
Stage 1	750	-	-	-	-
Stage 2	607	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.8	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1291	-	500	-	-
HCM Lane V/C Ratio	0.035	-	0.074	-	-
HCM Control Delay (s)	7.9	0	12.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Farmington Connectivity Study  
 29: Whispering Rod Rd/Chaffee Ln & W District Rd

2050 Scenario 1 (No Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	25	68	3	10	168	21	3	0	4	25	2	28
Future Volume (vph)	25	68	3	10	168	21	3	0	4	25	2	28
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	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.986			0.923			0.931	
Flt Protected		0.987			0.997			0.979			0.978	
Satd. Flow (prot)	0	1831	0	0	1831	0	0	1683	0	0	1696	0
Flt Permitted		0.987			0.997			0.979			0.978	
Satd. Flow (perm)	0	1831	0	0	1831	0	0	1683	0	0	1696	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		265			257			233			296	
Travel Time (s)		6.0			5.8			5.3			6.7	
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
Adj. Flow (vph)	27	74	3	11	183	23	3	0	4	27	2	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	104	0	0	217	0	0	7	0	0	59	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 24.7% ICU Level of Service A

Analysis Period (min) 15

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

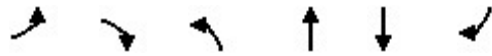
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	25	68	3	10	168	21	3	0	4	25	2	28
Future Vol, veh/h	25	68	3	10	168	21	3	0	4	25	2	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	74	3	11	183	23	3	0	4	27	2	30
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	8.5	7.5	7.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	43%	26%	5%	45%
Vol Thru, %	0%	71%	84%	4%
Vol Right, %	57%	3%	11%	51%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	7	96	199	55
LT Vol	3	25	10	25
Through Vol	0	68	168	2
RT Vol	4	3	21	28
Lane Flow Rate	8	104	216	60
Geometry Grp	1	1	1	1
Degree of Util (X)	0.009	0.123	0.245	0.074
Departure Headway (Hd)	4.448	4.25	4.078	4.428
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	809	831	872	814
Service Time	2.451	2.343	2.15	2.428
HCM Lane V/C Ratio	0.01	0.125	0.248	0.074
HCM Control Delay	7.5	8	8.5	7.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0.4	1	0.2

Farmington Connectivity Study  
 1: Canton Rd (RT 179) & Spielman Hwy (RT 4)

2050 Scenario 2 (Build) Conditions  
 AM PEAK



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	273	460	236	224	337	185
Future Volume (vph)	273	460	236	224	337	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98				
Frt		0.850			0.952	
Flt Protected	0.950			0.975		
Satd. Flow (prot)	1770	1583	0	1816	1773	0
Flt Permitted	0.950			0.452		
Satd. Flow (perm)	1770	1547	0	842	1773	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		413			43	
Link Speed (mph)	35			50	50	
Link Distance (ft)	986			565	665	
Travel Time (s)	19.2			7.7	9.1	
Confl. Peds. (#/hr)		1				
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	284	479	246	233	351	193
Shared Lane Traffic (%)						
Lane Group Flow (vph)	284	479	0	479	544	0
Number of Detectors	1	1	1	1	1	
Detector Template			Left			
Leading Detector (ft)	40	40	20	40	40	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	40	40	20	40	40	
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	pm+ov	D.P+P	NA	NA	
Protected Phases	4	1	1	12	2	
Permitted Phases		4	2			
Detector Phase	4	1	1	2	2	
Switch Phase						
Minimum Initial (s)	6.0	6.0	6.0		20.0	
Minimum Split (s)	17.0	10.0	10.0		26.6	
Total Split (s)	29.0	10.0	10.0		46.6	
Total Split (%)	33.9%	11.7%	11.7%		54.4%	
Maximum Green (s)	25.0	6.0	6.0		40.0	
Yellow Time (s)	3.0	3.0	3.0		5.0	
All-Red Time (s)	1.0	1.0	1.0		1.6	
Lost Time Adjust (s)	0.0	0.0			0.0	
Total Lost Time (s)	4.0	4.0			6.6	

Farmington Connectivity Study  
 1: Canton Rd (RT 179) & Spielman Hwy (RT 4)

2050 Scenario 2 (Build) Conditions  
 AM PEAK

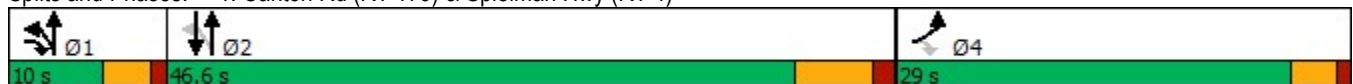


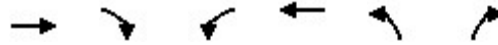
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	1.0	3.0	3.0		5.0	
Recall Mode	None	Min	Min		Min	
Walk Time (s)	12.0					
Flash Dont Walk (s)	1.0					
Pedestrian Calls (#/hr)	1					
Act Effct Green (s)	15.6	21.6		48.8	40.2	
Actuated g/C Ratio	0.20	0.28		0.64	0.53	
v/c Ratio	0.79	0.65		0.78	0.57	
Control Delay	44.8	8.1		20.1	15.2	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	44.8	8.1		20.1	15.2	
LOS	D	A		C	B	
Approach Delay	21.8			20.1	15.2	
Approach LOS	C			C	B	
Queue Length 50th (ft)	128	21		79	149	
Queue Length 95th (ft)	208	92		#239	294	
Internal Link Dist (ft)	906			485	585	
Turn Bay Length (ft)	260					
Base Capacity (vph)	581	736		614	952	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.49	0.65		0.78	0.57	

Intersection Summary

Area Type: Other  
 Cycle Length: 85.6  
 Actuated Cycle Length: 76.4  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 19.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 81.2%  
 ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Canton Rd (RT 179) & Spielman Hwy (RT 4)





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	602	130	115	406	71	112
Future Volume (vph)	602	130	115	406	71	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	60
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.976					0.850
Flt Protected				0.989	0.950	
Satd. Flow (prot)	1800	0	0	1824	1752	1568
Flt Permitted				0.989	0.950	
Satd. Flow (perm)	1800	0	0	1824	1752	1568
Link Speed (mph)	30			30	25	
Link Distance (ft)	740			816	860	
Travel Time (s)	16.8			18.5	23.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	621	134	119	419	73	115
Shared Lane Traffic (%)						
Lane Group Flow (vph)	755	0	0	538	73	115
Sign Control	Free			Free	Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	81.2%
Analysis Period (min)	15
	ICU Level of Service D

Intersection						
Int Delay, s/veh	4.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	602	130	115	406	71	112
Future Vol, veh/h	602	130	115	406	71	112
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	60
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	621	134	119	419	73	115

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	755	0	1345 688
Stage 1	-	-	-	-	688 -
Stage 2	-	-	-	-	657 -
Critical Hdwy	-	-	4.13	-	6.43 6.23
Critical Hdwy Stg 1	-	-	-	-	5.43 -
Critical Hdwy Stg 2	-	-	-	-	5.43 -
Follow-up Hdwy	-	-	2.227	-	3.527 3.327
Pot Cap-1 Maneuver	-	-	851	-	166 445
Stage 1	-	-	-	-	497 -
Stage 2	-	-	-	-	514 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	851	-	136 445
Mov Cap-2 Maneuver	-	-	-	-	136 -
Stage 1	-	-	-	-	497 -
Stage 2	-	-	-	-	420 -

Approach	EB	WB	NB
HCM Control Delay, s	0	2.2	32.5
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	136	445	-	-	851	-
HCM Lane V/C Ratio	0.538	0.259	-	-	0.139	-
HCM Control Delay (s)	58.7	15.9	-	-	9.9	0
HCM Lane LOS	F	C	-	-	A	A
HCM 95th %tile Q(veh)	2.6	1	-	-	0.5	-

3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



Lane Group	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↑↑			↑	↑			↑	↑	↑	↑	↑
Traffic Volume (vph)	100	35	152	80	288	67	15	107	267	205	125	258
Future Volume (vph)	100	35	152	80	288	67	15	107	267	205	125	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		50	0		0			0		145	110	
Storage Lanes		1	0		1			1		1	1	
Taper Length (ft)			25					25			50	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95
Ped Bike Factor	1.00			1.00				1.00				1.00
Frt	0.961				0.850					0.850		0.996
Flt Protected				0.968				0.950			0.950	
Satd. Flow (prot)	3387	0	0	1803	1583	0	0	1770	1863	1583	1770	1762
Flt Permitted				0.713				0.270			0.586	
Satd. Flow (perm)	3387	0	0	1325	1583	0	0	503	1863	1583	1092	1762
Right Turn on Red		No				No				Yes		
Satd. Flow (RTOR)										185		
Link Speed (mph)	25			30				25				35
Link Distance (ft)	761			292				461				785
Travel Time (s)	20.8			6.6				12.6				15.3
Confl. Peds. (#/hr)		3	3					1				
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	106	37	162	85	306	71	16	114	284	218	133	274
Shared Lane Traffic (%)												
Lane Group Flow (vph)	143	0	0	247	377	0	0	130	284	218	133	281
Number of Detectors	1		1	1	1		1	1	0	0	1	1
Detector Template			Left				Left					
Leading Detector (ft)	44		20	44	44		20	44	0	0	44	206
Trailing Detector (ft)	-6		0	-6	-6		0	-6	0	0	-6	200
Detector 1 Position(ft)	-6		0	-6	-6		0	-6	0	0	-6	200
Detector 1 Size(ft)	50		20	50	50		20	50	6	20	50	6
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	NA		Perm	NA	pt+ov		D.P+P	D.P+P	NA	Free	Perm	NA
Protected Phases	4			4	4 5		1	1	1 2			2
Permitted Phases			4				2	2		Free		2
Detector Phase	4		4	4	4		1	1	2		2	2
Switch Phase												
Minimum Initial (s)	9.0		9.0	9.0			5.0	5.0			15.0	15.0
Minimum Split (s)	14.0		14.0	14.0			9.0	9.0			21.0	21.0
Total Split (s)	31.0		31.0	31.0			11.0	11.0			28.0	28.0
Total Split (%)	25.0%		25.0%	25.0%			8.9%	8.9%			22.6%	22.6%
Maximum Green (s)	26.0		26.0	26.0			7.0	7.0			22.0	22.0
Yellow Time (s)	4.0		4.0	4.0			3.0	3.0			4.0	4.0
All-Red Time (s)	1.0		1.0	1.0			1.0	1.0			2.0	2.0
Lost Time Adjust (s)	0.0			0.0				0.0			0.0	0.0
Total Lost Time (s)	5.0			5.0				4.0			6.0	6.0

3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



Lane Group	SBR	SBR2	SEL2	SEL	SER	SER2	Ø3
Lane Configurations							
Traffic Volume (vph)	6	5	9	490	163	5	
Future Volume (vph)	6	5	9	490	163	5	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	60			0	255		
Storage Lanes	1			1	1		
Taper Length (ft)				25			
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	
Ped Bike Factor							
Frt		0.850			0.850		
Flt Protected				0.950			
Satd. Flow (prot)	0	1504	0	1770	1583	0	
Flt Permitted				0.990			
Satd. Flow (perm)	0	1504	0	1844	1583	0	
Right Turn on Red		Yes				No	
Satd. Flow (RTOR)		185					
Link Speed (mph)				30			
Link Distance (ft)				820			
Travel Time (s)				18.6			
Confl. Peds. (#/hr)	1				3	1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	6	5	10	521	173	5	
Shared Lane Traffic (%)		10%					
Lane Group Flow (vph)	0	4	0	531	178	0	
Number of Detectors		0	1	1	1		
Detector Template			Left				
Leading Detector (ft)		0	20	44	44		
Trailing Detector (ft)		0	0	-6	-6		
Detector 1 Position(ft)		0	0	-6	-6		
Detector 1 Size(ft)		20	20	50	50		
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		
Turn Type		Free	D,Pm	Prot	Prot		
Protected Phases				5	5	3	
Permitted Phases		Free	5				
Detector Phase			5	5	5		
Switch Phase							
Minimum Initial (s)			9.0	9.0	9.0	1.0	
Minimum Split (s)			14.0	14.0	14.0	23.0	
Total Split (s)			31.0	31.0	31.0	23.0	
Total Split (%)			25.0%	25.0%	25.0%	19%	
Maximum Green (s)			26.0	26.0	26.0	19.0	
Yellow Time (s)			4.0	4.0	4.0	4.0	
All-Red Time (s)			1.0	1.0	1.0	0.0	
Lost Time Adjust (s)				0.0	0.0		
Total Lost Time (s)				5.0	5.0		

Farmington Connectivity Study 2050 Scenario 2 (Build) Conditions  
**3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)**

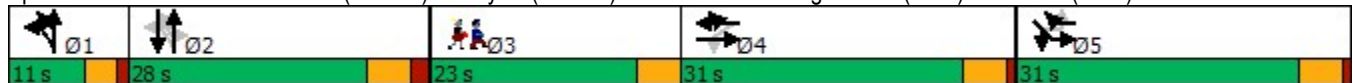


Lane Group	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL	SBT
Lead/Lag	Lag		Lag	Lag			Lead	Lead			Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes			Yes	Yes			Yes	Yes
Vehicle Extension (s)	1.5		1.5	1.5			1.5	1.5			2.5	2.5
Recall Mode	None		None	None			None	None			Min	Min
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	22.9			22.9	54.5			28.5	32.6	99.9	19.5	19.5
Actuated g/C Ratio	0.23			0.23	0.55			0.29	0.33	1.00	0.20	0.20
v/c Ratio	0.18			0.82	0.44			0.56	0.47	0.14	0.63	0.82
Control Delay	33.4			59.5	17.4			38.4	31.7	0.2	53.6	60.0
Queue Delay	0.0			0.0	0.0			0.0	0.0	0.0	0.0	0.0
Total Delay	33.4			59.5	17.4			38.4	31.7	0.2	53.6	60.0
LOS	C			E	B			D	C	A	D	E
Approach Delay	33.4			34.1			22.2				57.4	
Approach LOS	C			C			C				E	
Queue Length 50th (ft)	36			142	126			58	138	0	76	176
Queue Length 95th (ft)	80			#347	304			#146	284	0	#192	#405
Internal Link Dist (ft)	681			212			381				705	
Turn Bay Length (ft)										145	110	
Base Capacity (vph)	897			351	846			234	661	1583	244	394
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	0.16			0.70	0.45			0.56	0.43	0.14	0.55	0.71

**Intersection Summary**

Area Type: Other  
 Cycle Length: 124  
 Actuated Cycle Length: 99.9  
 Natural Cycle: 125  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.09  
 Intersection Signal Delay: 49.9      Intersection LOS: D  
 Intersection Capacity Utilization 95.2%      ICU Level of Service F  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

**Splits and Phases: 3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)**

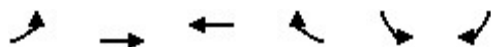




Lane Group	SBR	SBR2	SEL2	SEL	SER	SER2	Ø3
Lead/Lag							Lead
Lead-Lag Optimize?							Yes
Vehicle Extension (s)			1.5	1.5	1.5		3.0
Recall Mode			None	None	None		None
Walk Time (s)							7.0
Flash Dont Walk (s)							12.0
Pedestrian Calls (#/hr)							4
Act Effct Green (s)		99.9		26.5	26.5		
Actuated g/C Ratio		1.00		0.27	0.27		
v/c Ratio		0.00		1.09	0.42		
Control Delay		0.0		104.0	37.7		
Queue Delay		0.0		0.0	0.0		
Total Delay		0.0		104.0	37.7		
LOS		A		F	D		
Approach Delay				87.3			
Approach LOS				F			
Queue Length 50th (ft)		0		~382	93		
Queue Length 95th (ft)		0		#781	204		
Internal Link Dist (ft)				740			
Turn Bay Length (ft)		60			255		
Base Capacity (vph)		1504		488	419		
Starvation Cap Reductn		0		0	0		
Spillback Cap Reductn		0		0	0		
Storage Cap Reductn		0		0	0		
Reduced v/c Ratio		0.00		1.09	0.42		
<b>Intersection Summary</b>							

Farmington Connectivity Study  
 4: Farmington Ave (RT 4) & W Avon Rd (RT 167)

2050 Scenario 2 (Build) Conditions  
 AM PEAK



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3
Lane Configurations							
Traffic Volume (vph)	171	612	490	113	116	117	
Future Volume (vph)	171	612	490	113	116	117	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	365			0	0	0	
Storage Lanes	1			0	1	0	
Taper Length (ft)	50				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor					1.00		
Frt			0.975		0.932		
Flt Protected	0.950				0.976		
Satd. Flow (prot)	1770	1863	1816	0	1694	0	
Flt Permitted	0.237				0.976		
Satd. Flow (perm)	441	1863	1816	0	1688	0	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			11		40		
Link Speed (mph)		30	35		30		
Link Distance (ft)		1079	965		1192		
Travel Time (s)		24.5	18.8		27.1		
Confl. Peds. (#/hr)					3		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	
Adj. Flow (vph)	176	631	505	116	120	121	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	176	631	621	0	241	0	
Number of Detectors	1	2	2		1		
Detector Template							
Leading Detector (ft)	24	246	246		24		
Trailing Detector (ft)	-6	120	120		-6		
Detector 1 Position(ft)	-6	120	120		-6		
Detector 1 Size(ft)	30	6	6		30		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		
Detector 2 Position(ft)		240	240				
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.P+P	NA	NA		Prot		
Protected Phases	1	1 2	2		4	3	
Permitted Phases	2						
Detector Phase	1	2	2		4		
Switch Phase							
Minimum Initial (s)	5.0		15.0		7.0	1.0	
Minimum Split (s)	9.5		22.5		22.5	23.0	
Total Split (s)	19.0		44.5		28.0	23.0	
Total Split (%)	16.6%		38.9%		24.5%	20%	

Farmington Connectivity Study  
 4: Farmington Ave (RT 4) & W Avon Rd (RT 167)

2050 Scenario 2 (Build) Conditions  
 AM PEAK

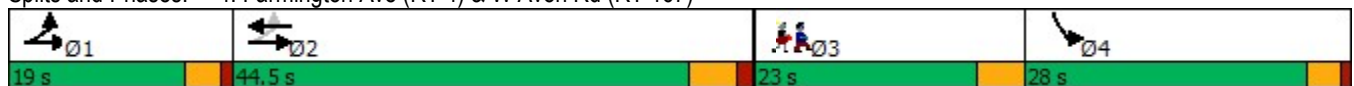


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3
Maximum Green (s)	15.0		39.0		24.0		19.0
Yellow Time (s)	3.0		4.0		3.0		4.0
All-Red Time (s)	1.0		1.5		1.0		0.0
Lost Time Adjust (s)	0.0		0.0		0.0		
Total Lost Time (s)	4.0		5.5		4.0		
Lead/Lag	Lead		Lag		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	1.5		2.5		2.0		3.0
Recall Mode	None		Min		None		None
Walk Time (s)							7.0
Flash Dont Walk (s)							11.0
Pedestrian Calls (#/hr)							9
Act Effct Green (s)	47.8	52.0	37.9		14.3		
Actuated g/C Ratio	0.61	0.67	0.49		0.18		
v/c Ratio	0.43	0.51	0.70		0.70		
Control Delay	10.8	11.0	24.4		38.2		
Queue Delay	0.0	0.0	0.0		0.0		
Total Delay	10.8	11.0	24.4		38.2		
LOS	B	B	C		D		
Approach Delay		10.9	24.4		38.2		
Approach LOS		B	C		D		
Queue Length 50th (ft)	21	105	183		86		
Queue Length 95th (ft)	106	446	#685		222		
Internal Link Dist (ft)		999	885		1112		
Turn Bay Length (ft)	365						
Base Capacity (vph)	561	1321	964		577		
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	0.31	0.48	0.64		0.42		

Intersection Summary

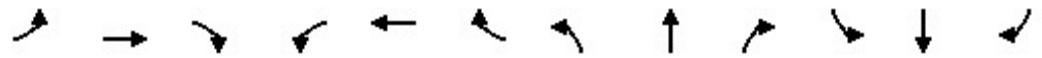
Area Type: Other  
 Cycle Length: 114.5  
 Actuated Cycle Length: 77.8  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.70  
 Intersection Signal Delay: 19.9 Intersection LOS: B  
 Intersection Capacity Utilization 67.0% ICU Level of Service C  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 4: Farmington Ave (RT 4) & W Avon Rd (RT 167)



Farmington Connectivity Study  
5: Farmington Ave (RT 4) & Monteith Dr

2050 Scenario 2 (Build) Conditions  
AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	231	365	233	208	322	380	158	152	297	133	99	94
Future Volume (vph)	231	365	233	208	322	380	158	152	297	133	99	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	250		100	250		0	0		0
Storage Lanes	1		0	1		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					0.98						
Frt		0.949				0.850		0.901				0.919
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1768	0	1770	1863	1583	1770	1678	0	1770	1712	0
Flt Permitted	0.302			0.102			0.370			0.180		
Satd. Flow (perm)	562	1768	0	190	1863	1559	689	1678	0	335	1712	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32				389		93			54	
Link Speed (mph)		35			35			30			25	
Link Distance (ft)		784			925			1010			548	
Travel Time (s)		15.3			18.0			23.0			14.9	
Confl. Peds. (#/hr)	3					3						
Peak Hour Factor	0.74	0.74	0.92	0.92	0.74	0.74	0.92	0.92	0.92	0.74	0.92	0.74
Adj. Flow (vph)	312	493	253	226	435	514	172	165	323	180	108	127
Shared Lane Traffic (%)												
Lane Group Flow (vph)	312	746	0	226	435	514	172	488	0	180	235	0
Number of Detectors	1	0		1	1	1	1	2		3	2	
Detector Template	Left			Left		Right	Left	Thru			Thru	
Leading Detector (ft)	20	0		20	356	20	20	100		24	100	
Trailing Detector (ft)	0	0		0	350	0	0	0		-6	0	
Detector 1 Position(ft)	0	0		0	350	0	0	0		-6	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		6	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)								94		6	94	
Detector 2 Size(ft)								6		6	6	
Detector 2 Type								Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0		0.0	0.0	
Detector 3 Position(ft)										18		
Detector 3 Size(ft)										6		
Detector 3 Type										Cl+Ex		
Detector 3 Channel												
Detector 3 Extend (s)										0.0		
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2	7	3	8		7	4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	7	3	8		7	4	



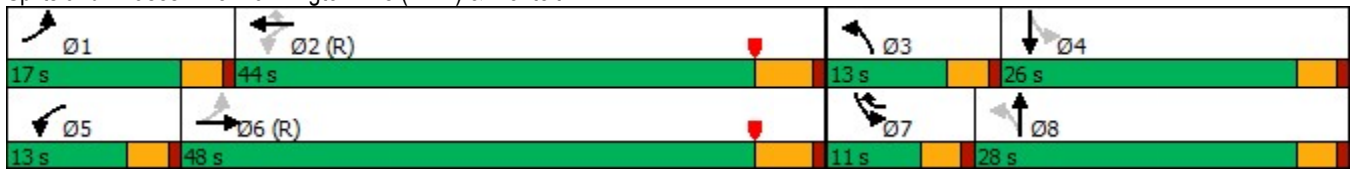
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
<b>Switch Phase</b>												
Minimum Initial (s)	5.0	15.0		5.0	15.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	32.4		9.0	32.4	9.0	9.0	21.0		9.0	21.0	
Total Split (s)	17.0	48.0		13.0	44.0	11.0	13.0	28.0		11.0	26.0	
Total Split (%)	17.0%	48.0%		13.0%	44.0%	11.0%	13.0%	28.0%		11.0%	26.0%	
Maximum Green (s)	13.0	42.6		9.0	38.6	7.0	9.0	24.0		7.0	22.0	
Yellow Time (s)	3.0	4.4		3.0	4.4	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	5.4		4.0	5.4	4.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	1.5	3.0	3.0		1.5	3.0	
Recall Mode	None	C-Max		None	C-Max	None	None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		20.0			20.0			10.0			10.0	
Pedestrian Calls (#/hr)		3			3			3			3	
Act Effct Green (s)	56.4	42.6		49.6	39.2	47.6	32.8	24.0		29.2	22.2	
Actuated g/C Ratio	0.56	0.43		0.50	0.39	0.48	0.33	0.24		0.29	0.22	
v/c Ratio	0.67	0.97		0.96	0.60	0.54	0.54	1.03		0.91	0.56	
Control Delay	19.0	53.6		74.1	28.5	6.1	30.5	81.4		73.4	32.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	19.0	53.6		74.1	28.5	6.1	30.5	81.4		73.4	32.2	
LOS	B	D		E	C	A	C	F		E	C	
Approach Delay		43.4			27.5			68.2			50.1	
Approach LOS		D			C			E			D	
Queue Length 50th (ft)	97	439		92	219	41	78	~287		82	102	
Queue Length 95th (ft)	116	445		#243	245	52	131	#487		#125	181	
Internal Link Dist (ft)		704			845			930			468	
Turn Bay Length (ft)	200			250		100	250					
Base Capacity (vph)	477	771		236	730	947	324	473		198	421	
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	0.65	0.97		0.96	0.60	0.54	0.53	1.03		0.91	0.56	

**Intersection Summary**

Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 16 (16%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.03  
 Intersection Signal Delay: 43.5  
 Intersection LOS: D  
 Intersection Capacity Utilization 93.1%  
 ICU Level of Service F  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.

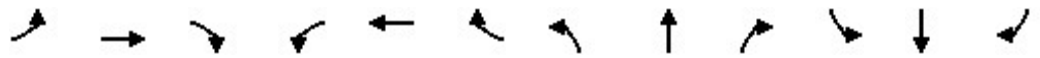
# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 5: Farmington Ave (RT 4) & Monteith Dr



Farmington Connectivity Study  
 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)

2050 Scenario 2 (Build) Conditions  
 AM PEAK

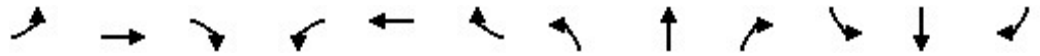


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	669	21	60	562	166	21	3	40	403	33	77
Future Volume (vph)	60	669	21	60	562	166	21	3	40	403	33	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90		0	90		90	0		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	65			110			25			50		
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								0.97		1.00		
Frt		0.995				0.850		0.860				0.895
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1719	1800	0	1719	1810	1538	1719	1508	0	1719	1620	0
Flt Permitted	0.210			0.090			0.588			0.726		
Satd. Flow (perm)	380	1800	0	163	1810	1538	1064	1508	0	1309	1620	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				175		44				77
Link Speed (mph)		40			40			30				35
Link Distance (ft)		635			779			428				768
Travel Time (s)		10.8			13.3			9.7				15.0
Confl. Peds. (#/hr)									2	2		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	66	735	23	66	618	182	23	3	44	443	36	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	66	758	0	66	618	182	23	47	0	443	121	0
Number of Detectors	1	2		1	2	0	1	1		1	1	
Detector Template												
Leading Detector (ft)	45	342		45	342	0	55	50		50	60	
Trailing Detector (ft)	-5	190		-5	190	0	-5	-10		-10	-10	
Detector 1 Position(ft)	-5	190		-5	190	0	-5	-10		-10	-10	
Detector 1 Size(ft)	50	6		50	6	20	60	60		60	70	
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)		336			336							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	8		7	8	
Permitted Phases	6			2		2	8			8		
Detector Phase	1	6		5	2	2	7	8		7	8	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	5.0	7.0		5.0	7.0	
Minimum Split (s)	10.4	22.0		10.4	22.0	22.0	11.0	14.0		11.0	14.0	
Total Split (s)	15.0	48.0		15.0	48.0	48.0	27.0	16.0		27.0	16.0	

Lane Group	Ø9
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)	
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	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	5.0
Total Split (s)	14.0

Farmington Connectivity Study  
 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)

2050 Scenario 2 (Build) Conditions  
 AM PEAK










Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	12.5%	40.0%		12.5%	40.0%	40.0%	22.5%	13.3%		22.5%	13.3%	
Maximum Green (s)	9.6	41.0		9.6	41.0	41.0	21.1	9.0		21.1	9.0	
Yellow Time (s)	4.4	5.0		4.4	5.0	5.0	3.0	4.1		3.0	4.1	
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	2.9	2.9		2.9	2.9	
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)	5.4	7.0		5.4	7.0	7.0	5.9	7.0		5.9	7.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	65.5	58.1		65.5	58.1	58.1	30.2	8.0		30.2	8.0	
Actuated g/C Ratio	0.55	0.48		0.55	0.48	0.48	0.25	0.07		0.25	0.07	
v/c Ratio	0.23	0.87		0.38	0.71	0.22	0.06	0.33		1.10	0.67	
Control Delay	14.8	41.5		19.0	32.1	4.7	30.0	23.5		114.1	41.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	14.8	41.5		19.0	32.1	4.7	30.0	23.5		114.1	41.2	
LOS	B	D		B	C	A	C	C		F	D	
Approach Delay		39.4			25.3			25.6			98.5	
Approach LOS		D			C			C			F	
Queue Length 50th (ft)	20	499		20	358	3	13	2		~365	33	
Queue Length 95th (ft)	53	#967		53	#721	54	33	41		#495	#105	
Internal Link Dist (ft)		555			699			348			688	
Turn Bay Length (ft)	90			90		90				150		
Base Capacity (vph)	320	872		215	876	834	383	153		401	192	
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	0.21	0.87		0.31	0.71	0.22	0.06	0.31		1.10	0.63	

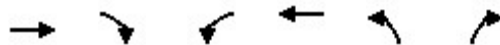
Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 45 (38%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.10  
 Intersection Signal Delay: 48.1  
 Intersection LOS: D  
 Intersection Capacity Utilization 85.8%  
 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.

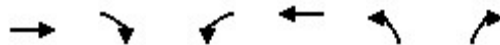
Splits and Phases: 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)

 Ø1	 Ø2 (R)	 Ø7	 Ø8	 Ø9
15 s	48 s	27 s	16 s	14 s
 Ø5	 Ø6 (R)			
15 s	48 s			

Lane Group	Ø9
Total Split (%)	12%
Maximum Green (s)	10.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
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)	16.0
Pedestrian Calls (#/hr)	2
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø4
Lane Configurations	↑↑		↵	↑	↵↵			
Traffic Volume (vph)	1160	107	15	707	160	41		
Future Volume (vph)	1160	107	15	707	160	41		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)		0	200		0	0		
Storage Lanes		0	1		1	0		
Taper Length (ft)			50		25			
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00		
Ped Bike Factor	1.00		1.00		0.98			
Frt	0.987				0.972			
Flt Protected			0.950		0.962			
Satd. Flow (prot)	3486	0	1770	1863	1742	0		
Flt Permitted			0.157		0.962			
Satd. Flow (perm)	3486	0	292	1863	1702	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)	11				7			
Link Speed (mph)	30			30	30			
Link Distance (ft)	1042			566	488			
Travel Time (s)	23.7			12.9	11.1			
Confl. Peds. (#/hr)		5	5		8			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Adj. Flow (vph)	1221	113	16	744	168	43		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	1334	0	16	744	211	0		
Number of Detectors	0		0	0	3			
Detector Template								
Leading Detector (ft)	0		0	0	24			
Trailing Detector (ft)	0		0	0	-6			
Detector 1 Position(ft)	0		0	0	-6			
Detector 1 Size(ft)	6		20	6	6			
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel								
Detector 1 Extend (s)	0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0		0.0	0.0	0.0			
Detector 2 Position(ft)					6			
Detector 2 Size(ft)					6			
Detector 2 Type					Cl+Ex			
Detector 2 Channel								
Detector 2 Extend (s)					0.0			
Detector 3 Position(ft)					18			
Detector 3 Size(ft)					6			
Detector 3 Type					Cl+Ex			
Detector 3 Channel								
Detector 3 Extend (s)					0.0			
Turn Type	NA		Perm	NA	Prot			
Protected Phases	2 4			2	5		3	4
Permitted Phases			2					
Detector Phase	2		2	2	5			

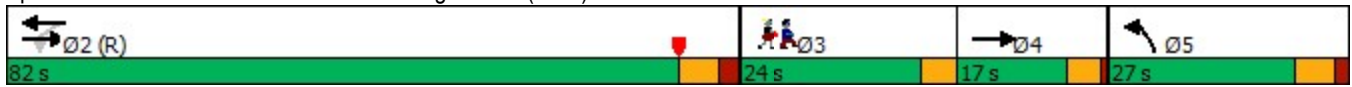


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø4
<b>Switch Phase</b>								
Minimum Initial (s)			15.0	15.0	7.0		7.0	6.0
Minimum Split (s)			22.1	22.1	13.3		24.0	10.8
Total Split (s)			82.0	82.0	27.0		24.0	17.0
Total Split (%)			54.7%	54.7%	18.0%		16%	11%
Maximum Green (s)			74.9	74.9	20.7		20.0	12.2
Yellow Time (s)			4.6	4.6	4.5		4.0	3.8
All-Red Time (s)			2.5	2.5	1.8		0.0	1.0
Lost Time Adjust (s)			0.0	0.0	0.0			
Total Lost Time (s)			7.1	7.1	6.3			
<b>Lead/Lag</b>							Lead	Lag
Lead-Lag Optimize?							Yes	Yes
Vehicle Extension (s)			3.0	3.0	1.5		3.0	1.5
Recall Mode			C-Max	C-Max	None		None	None
Walk Time (s)							7.0	
Flash Dont Walk (s)							13.0	
Pedestrian Calls (#/hr)							13	
Act Effct Green (s)	104.3		104.3	104.3	22.7			
Actuated g/C Ratio	0.70		0.70	0.70	0.15			
v/c Ratio	0.55		0.08	0.57	0.78			
Control Delay	15.0		3.8	6.3	78.6			
Queue Delay	0.6		0.0	0.9	0.1			
Total Delay	15.6		3.8	7.2	78.7			
LOS	B		A	A	E			
Approach Delay	15.6			7.1	78.7			
Approach LOS	B			A	E			
Queue Length 50th (ft)	239		1	48	194			
Queue Length 95th (ft)	553		m1	m57	277			
Internal Link Dist (ft)	962			486	408			
Turn Bay Length (ft)			200					
Base Capacity (vph)	2426		202	1295	283			
Starvation Cap Reductn	0		0	280	0			
Spillback Cap Reductn	625		0	0	1			
Storage Cap Reductn	0		0	0	0			
Reduced v/c Ratio	0.74		0.08	0.73	0.75			

**Intersection Summary**

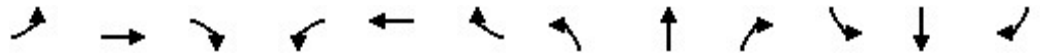
Area Type:	Other
Cycle Length:	150
Actuated Cycle Length:	150
Offset:	30 (20%), Referenced to phase 2:EBWB, Start of Yellow
Natural Cycle:	100
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.78
Intersection Signal Delay:	18.6
Intersection LOS:	B
Intersection Capacity Utilization:	59.7%
ICU Level of Service:	B
Analysis Period (min):	15
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 7: Garden St & Farmington Ave (RT 4)



Farmington Connectivity Study  
 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4)

2050 Scenario 2 (Build) Conditions  
 AM PEAK

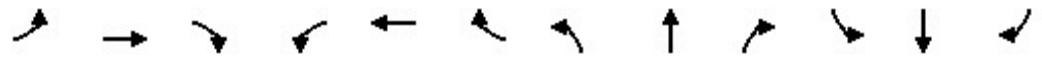


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	1150	117	55	574	238	88	128	124	262	123	19
Future Volume (vph)	10	1150	117	55	574	238	88	128	124	262	123	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	255		0	100		50	0		0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (ft)	65			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.956				0.850		0.994	
Flt Protected	0.950			0.950			0.950				0.969	
Satd. Flow (prot)	1770	3539	1583	1770	1781	0	1770	1863	1583	0	1794	0
Flt Permitted	0.075			0.069			0.950				0.969	
Satd. Flow (perm)	140	3539	1583	129	1781	0	1770	1863	1583	0	1794	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		566			848			677			693	
Travel Time (s)		12.9			19.3			15.4			15.8	
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)	11	1250	127	60	624	259	96	139	135	285	134	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	1250	127	60	883	0	96	139	135	0	440	0
Number of Detectors	3	3	4	1	1		3	3	2	1	2	
Detector Template										Left		
Leading Detector (ft)	30	30	36	34	34		30	30	48	20	48	
Trailing Detector (ft)	0	0	-6	0	0		0	0	0	0	-6	
Detector 1 Position(ft)	0	0	-6	0	0		0	0	0	0	-6	
Detector 1 Size(ft)	6	6	6	34	34		6	6	12	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	12	12	6				12	12	18		6	
Detector 2 Size(ft)	6	6	6				6	6	30		42	
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0	0.0				0.0	0.0	0.0		0.0	
Detector 3 Position(ft)	24	24	18				24	24				
Detector 3 Size(ft)	6	6	6				6	6				
Detector 3 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex				
Detector 3 Channel												
Detector 3 Extend (s)	0.0	0.0	0.0				0.0	0.0				
Detector 4 Position(ft)			30									
Detector 4 Size(ft)			6									
Detector 4 Type			Cl+Ex									
Detector 4 Channel												
Detector 4 Extend (s)			0.0									
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Split	NA	pt+ov	Split	NA	

Lane Group	Ø3
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)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Detector 4 Position(ft)	
Detector 4 Size(ft)	
Detector 4 Type	
Detector 4 Channel	
Detector 4 Extend (s)	
Turn Type	

Farmington Connectivity Study  
 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4)

2050 Scenario 2 (Build) Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	1	6		5	2		7	7	5 7	4	4	
Permitted Phases	6		6	2								
Detector Phase	1	6	6	5	2		7	7	7	4	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	7.0	20.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	9.5	27.3	27.3	12.0	27.3		13.0	13.0		22.5	22.5	
Total Split (s)	15.0	54.0	54.0	15.0	54.0		23.0	23.0		34.0	34.0	
Total Split (%)	10.0%	36.0%	36.0%	10.0%	36.0%		15.3%	15.3%		22.7%	22.7%	
Maximum Green (s)	11.0	46.7	46.7	10.0	46.7		17.0	17.0		28.3	28.3	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	2.8	2.8	2.0	2.8		3.0	3.0		2.7	2.7	
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	7.3	7.3	5.0	7.3		6.0	6.0				5.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag					Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None		None	None	
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										5.0	5.0	
Pedestrian Calls (#/hr)										0	0	
Act Effct Green (s)	61.7	54.3	54.3	66.7	60.9		15.0	15.0	26.3			51.4
Actuated g/C Ratio	0.41	0.36	0.36	0.44	0.41		0.10	0.10	0.18			0.34
v/c Ratio	0.10	0.98	0.22	0.43	1.22		0.54	0.75	0.49			0.72
Control Delay	15.1	55.7	23.9	35.4	146.8		75.2	89.0	60.1			50.9
Queue Delay	0.0	7.1	0.0	0.0	0.0		0.0	0.0	0.0			0.0
Total Delay	15.1	62.8	23.9	35.4	146.8		75.2	89.0	60.1			50.9
LOS	B	E	C	D	F		E	F	E			D
Approach Delay		58.9			139.7			74.9				50.9
Approach LOS		E			F			E				D
Queue Length 50th (ft)	6	~683	90	35	~1030		91	134	118			375
Queue Length 95th (ft)	m4	#887	m88	m40	#1420		152	208	182			507
Internal Link Dist (ft)		486			768			597				613
Turn Bay Length (ft)	100		150	255			100		50			
Base Capacity (vph)	181	1280	572	167	722		204	215	281			614
Starvation Cap Reductn	0	42	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	0.06	1.01	0.22	0.36	1.22		0.47	0.65	0.48			0.72

Intersection Summary

Area Type:	Other
Cycle Length:	150
Actuated Cycle Length:	150
Offset:	20 (13%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow
Natural Cycle:	150
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.22
Intersection Signal Delay:	83.9
Intersection Capacity Utilization:	90.4%
Intersection LOS:	F
ICU Level of Service:	E

Lane Group	Ø3
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	25.0
Total Split (s)	24.0
Total Split (%)	16%
Maximum Green (s)	20.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	13.0
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	
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	
<b>Intersection Summary</b>	

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.

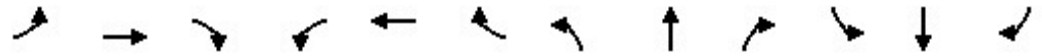
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4)

 Ø1	 Ø2 (R)	 Ø3	 Ø4	 Ø7
15 s	54 s	24 s	34 s	23 s
 Ø5	 Ø6 (R)			
15 s	54 s			

Farmington Connectivity Study  
 9: High St/Backage Rd & Farmington Ave (RT 4)

2050 Scenario 2 (Build) Conditions  
 AM PEAK

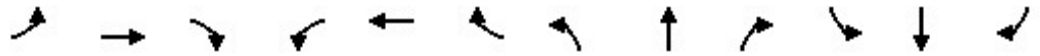


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	1468	33	26	890	7	32	1	170	4	0	3
Future Volume (vph)	8	1468	33	26	890	7	32	1	170	4	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	85		100	115		0	0		85	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	70			115			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.999				0.850		0.942	
Flt Protected	0.950			0.950				0.954			0.972	
Satd. Flow (prot)	1752	3494	0	1752	1843	0	0	1760	1568	0	1689	0
Flt Permitted	0.223			0.112								
Satd. Flow (perm)	411	3494	0	207	1843	0	0	1845	1568	0	1738	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		2							189			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		848			473			291			375	
Travel Time (s)		19.3			10.8			6.6			8.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	9	1631	37	29	989	8	36	1	189	4	0	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	1668	0	29	997	0	0	37	189	0	7	0
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template							Left			Left		
Leading Detector (ft)	40	40		25	25		20	35	35	20	30	
Trailing Detector (ft)	0	0		-10	-10		0	0	0	0	0	
Detector 1 Position(ft)	0	0		-10	-10		0	0	0	0	0	
Detector 1 Size(ft)	40	40		35	35		20	35	35	20	30	
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	pm+pt	NA		pm+pt	NA		D.P+P	NA	Prot	Perm	NA	
Protected Phases	1	6		5	2		4	4 7	4 7			7
Permitted Phases	6			2			7			7		
Detector Phase	1	6		5	2		4	4	4	7	7	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		7.0			7.0	7.0	
Minimum Split (s)	9.0	21.7		9.0	21.7		11.7			12.0	12.0	
Total Split (s)	13.0	83.0		13.0	83.0		14.0			16.0	16.0	
Total Split (%)	8.7%	55.3%		8.7%	55.3%		9.3%			10.7%	10.7%	
Maximum Green (s)	9.0	76.3		9.0	76.3		9.3			11.0	11.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0			3.0	3.0	
All-Red Time (s)	1.0	2.2		1.0	2.2		1.7			2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0							0.0
Total Lost Time (s)	4.0	6.7		4.0	6.7							5.0
Lead/Lag	Lead	Lag		Lead	Lag		Lag					

Lane Group	Ø3
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)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	24.0
Total Split (s)	24.0
Total Split (%)	16%
Maximum Green (s)	20.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead

Farmington Connectivity Study  
 9: High St/Backage Rd & Farmington Ave (RT 4)

2050 Scenario 2 (Build) Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes					
Vehicle Extension (s)	1.5	2.0		1.5	2.0		2.0			2.0	2.0	
Recall Mode	None	C-Min		None	C-Min		None			None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	127.7	122.0		129.5	125.7		11.1	11.1				7.0
Actuated g/C Ratio	0.85	0.81		0.86	0.84		0.07	0.07				0.05
v/c Ratio	0.02	0.59		0.13	0.65		0.27	0.65				0.09
Control Delay	2.2	10.1		3.3	8.7		67.8	18.4				71.0
Queue Delay	0.0	0.1		0.0	0.0		0.0	0.0				0.0
Total Delay	2.2	10.3		3.3	8.7		67.8	18.4				71.0
LOS	A	B		A	A		E	B				E
Approach Delay		10.2			8.6		26.5					71.0
Approach LOS		B			A		C					E
Queue Length 50th (ft)	1	340		2	196		36	0				7
Queue Length 95th (ft)	m1	m197		13	791		66	72				24
Internal Link Dist (ft)		768			393		211					295
Turn Bay Length (ft)	85			115					85			
Base Capacity (vph)	437	2843		272	1544		152	303				127
Starvation Cap Reductn	0	310		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	0.02	0.66		0.11	0.65		0.24	0.62				0.06

Intersection Summary

Area Type: Other  
 Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 45 (30%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 130  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.65  
 Intersection Signal Delay: 11.1      Intersection LOS: B  
 Intersection Capacity Utilization 71.7%      ICU Level of Service C  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

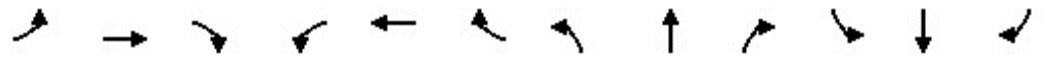
Splits and Phases: 9: High St/Backage Rd & Farmington Ave (RT 4)

Ø1 13 s	Ø2 (R) 83 s	Ø3 24 s	Ø4 14 s	Ø7 16 s
Ø5 13 s	Ø6 (R) 83 s			

Lane Group	Ø3
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	13.0
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	
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	
<b>Intersection Summary</b>	

Farmington Connectivity Study  
 10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd

2050 Scenario 2 (Build) Conditions  
 AM PEAK

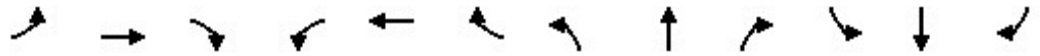


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	5	1	0	79	3	65	2	443	132	151	506	3
Future Volume (vph)	5	1	0	79	3	65	2	443	132	151	506	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00			1.00			1.00	
Frt					0.941			0.969			0.999	
Flt Protected		0.959			0.974						0.989	
Satd. Flow (prot)	0	1703	0	0	1627	0	0	1721	0	0	1754	0
Flt Permitted		0.842			0.828			0.998			0.661	
Satd. Flow (perm)	0	1495	0	0	1382	0	0	1717	0	0	1172	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					31			15				
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		360			802			2590			707	
Travel Time (s)		8.2			18.2			44.1			12.1	
Confl. Peds. (#/hr)			1	1			1					1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Adj. Flow (vph)	6	1	0	93	4	76	2	521	155	178	595	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	7	0	0	173	0	0	678	0	0	777	0
Number of Detectors	1	1		1	1		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	22		20	22		20	206		20	206	
Trailing Detector (ft)	0	-10		0	-10		0	100		0	100	
Detector 1 Position(ft)	0	-10		0	-10		0	100		0	100	
Detector 1 Size(ft)	20	32		20	32		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)								200			200	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		D.P+P	NA	
Protected Phases		4			4			2		1	12	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		1	1	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0		5.0		
Minimum Split (s)	12.0	12.0		12.0	12.0		21.6	21.6		9.0		
Total Split (s)	30.0	30.0		30.0	30.0		51.6	51.6		12.0		
Total Split (%)	26.0%	26.0%		26.0%	26.0%		44.6%	44.6%		10.4%		
Maximum Green (s)	25.0	25.0		25.0	25.0		45.0	45.0		8.0		
Yellow Time (s)	3.3	3.3		3.3	3.3		4.2	4.2		3.0		

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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)	
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	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	22.0
Total Split (s)	22.0
Total Split (%)	19%
Maximum Green (s)	18.0
Yellow Time (s)	4.0

Farmington Connectivity Study  
 10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd

2050 Scenario 2 (Build) Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	1.7	1.7		1.7	1.7		2.4	2.4		1.0		
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.0			5.0			6.6				
Lead/Lag	Lag	Lag		Lag	Lag		Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes		
Vehicle Extension (s)	1.5	1.5		1.5	1.5		2.5	2.5		3.0		
Recall Mode	None	None		None	None		Min	Min		None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		13.2			13.2			41.2				52.2
Actuated g/C Ratio		0.16			0.16			0.50				0.64
v/c Ratio		0.03			0.70			0.78				0.97
Control Delay		32.5			43.7			26.8				40.9
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		32.5			43.7			26.8				40.9
LOS		C			D			C				D
Approach Delay		32.5			43.7			26.8				40.9
Approach LOS		C			D			C				D
Queue Length 50th (ft)		3			64			228				151
Queue Length 95th (ft)		16			156			#668				#882
Internal Link Dist (ft)		280			722			2510				627
Turn Bay Length (ft)												
Base Capacity (vph)		472			458			984				804
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			0.38			0.69				0.97

Intersection Summary

Area Type: Other  
 Cycle Length: 115.6  
 Actuated Cycle Length: 82  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.97  
 Intersection Signal Delay: 35.3  
 Intersection LOS: D  
 Intersection Capacity Utilization 87.9%  
 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.

Splits and Phases: 10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd



Lane Group	Ø3
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	5
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	335	99	36	191	374	134
Future Volume (vph)	335	99	36	191	374	134
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	0.969				0.964	
Flt Protected	0.963			0.992		
Satd. Flow (prot)	1738	0	0	1848	1796	0
Flt Permitted	0.963			0.992		
Satd. Flow (perm)	1738	0	0	1848	1796	0
Link Speed (mph)	40			30	40	
Link Distance (ft)	781			809	2590	
Travel Time (s)	13.3			18.4	44.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	360	106	39	205	402	144
Shared Lane Traffic (%)						
Lane Group Flow (vph)	466	0	0	244	546	0
Sign Control	Stop			Stop	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	72.0%
ICU Level of Service	C
Analysis Period (min)	15

Intersection	
Intersection Delay, s/veh	31.2
Intersection LOS	D

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	335	99	36	191	374	134
Future Vol, veh/h	335	99	36	191	374	134
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	360	106	39	205	402	144
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	30.9	14.8	38.8
HCM LOS	D	B	E

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	16%	77%	0%
Vol Thru, %	84%	0%	74%
Vol Right, %	0%	23%	26%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	227	434	508
LT Vol	36	335	0
Through Vol	191	0	374
RT Vol	0	99	134
Lane Flow Rate	244	467	546
Geometry Grp	1	1	1
Degree of Util (X)	0.445	0.812	0.891
Departure Headway (Hd)	6.57	6.264	5.871
Convergence, Y/N	Yes	Yes	Yes
Cap	547	579	617
Service Time	4.62	4.291	3.899
HCM Lane V/C Ratio	0.446	0.807	0.885
HCM Control Delay	14.8	30.9	38.8
HCM Lane LOS	B	D	E
HCM 95th-tile Q	2.3	8.1	10.7



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	103	202	36	17	40	94
Future Volume (vph)	103	202	36	17	40	94
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			0.957		0.905	
Flt Protected		0.983			0.985	
Satd. Flow (prot)	0	1796	1748	0	1629	0
Flt Permitted		0.983			0.985	
Satd. Flow (perm)	0	1796	1748	0	1629	0
Link Speed (mph)		30	30		25	
Link Distance (ft)		546	304		789	
Travel Time (s)		12.4	6.9		21.5	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	123	240	43	20	48	112
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	363	63	0	160	0
Sign Control		Free	Free		Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	37.7%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	4.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	103	202	36	17	40	94
Future Vol, veh/h	103	202	36	17	40	94
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	123	240	43	20	48	112

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	63	0	-	0	539 53
Stage 1	-	-	-	-	53 -
Stage 2	-	-	-	-	486 -
Critical Hdwy	4.14	-	-	-	6.44 6.24
Critical Hdwy Stg 1	-	-	-	-	5.44 -
Critical Hdwy Stg 2	-	-	-	-	5.44 -
Follow-up Hdwy	2.236	-	-	-	3.536 3.336
Pot Cap-1 Maneuver	1527	-	-	-	500 1009
Stage 1	-	-	-	-	964 -
Stage 2	-	-	-	-	614 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1527	-	-	-	454 1009
Mov Cap-2 Maneuver	-	-	-	-	454 -
Stage 1	-	-	-	-	874 -
Stage 2	-	-	-	-	614 -

Approach	EB	WB	SB
HCM Control Delay, s	2.6	0	11.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1527	-	-	-	739
HCM Lane V/C Ratio	0.08	-	-	-	0.216
HCM Control Delay (s)	7.6	0	-	-	11.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.8

Farmington Connectivity Study  
13: Stafford Ave & Stevens St

2050 Scenario 2 (Build) Conditions  
AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	30	303	108	92	140	21	66	140	68	48	198	37
Future Volume (vph)	30	303	108	92	140	21	66	140	68	48	198	37
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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00			0.99			1.00	
Frt		0.967			0.989			0.967			0.982	
Flt Protected		0.997			0.982			0.988			0.992	
Satd. Flow (prot)	0	1782	0	0	1809	0	0	1770	0	0	1815	0
Flt Permitted		0.964			0.607			0.740			0.854	
Satd. Flow (perm)	0	1723	0	0	1117	0	0	1326	0	0	1562	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		543			653			565			383	
Travel Time (s)		12.3			14.8			12.8			8.7	
Confl. Peds. (#/hr)			8	8					1	1		
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	35	356	127	108	165	25	78	165	80	56	233	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	518	0	0	298	0	0	323	0	0	333	0
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	81		20	81		20	116		20	106	
Trailing Detector (ft)	0	75		0	75		0	110		0	100	
Detector 1 Position(ft)	0	75		0	75		0	110		0	100	
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	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	19.0	19.0		19.0	19.0		19.0	19.0		19.0	19.0	
Total Split (s)	34.0	34.0		34.0	34.0		29.0	29.0		29.0	29.0	
Total Split (%)	41.5%	41.5%		41.5%	41.5%		35.4%	35.4%		35.4%	35.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	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			4.0			4.0	
Lead/Lag							Lag	Lag		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		2.0	2.0		2.0	2.0	

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	19.0
Total Split (s)	19.0
Total Split (%)	23%
Maximum Green (s)	17.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0

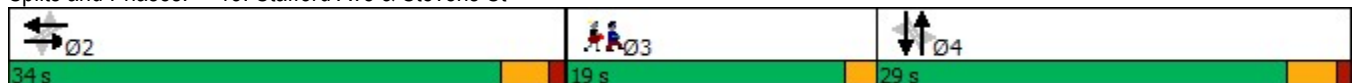


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		30.1			30.1			20.4				20.4
Actuated g/C Ratio		0.39			0.39			0.26				0.26
v/c Ratio		0.78			0.69			0.93				0.81
Control Delay		31.7			31.2			61.8				43.0
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		31.7			31.2			61.8				43.0
LOS		C			C			E				D
Approach Delay		31.7			31.2			61.8				43.0
Approach LOS		C			C			E				D
Queue Length 50th (ft)		217			119			151				150
Queue Length 95th (ft)		#364			#213			#259				226
Internal Link Dist (ft)		463			573			485				303
Turn Bay Length (ft)												
Base Capacity (vph)		668			433			428				505
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		0.78			0.69			0.75				0.66

Intersection Summary

Area Type: Other  
 Cycle Length: 82  
 Actuated Cycle Length: 77.6  
 Natural Cycle: 70  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.93  
 Intersection Signal Delay: 40.8      Intersection LOS: D  
 Intersection Capacity Utilization 71.3%      ICU Level of Service C  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

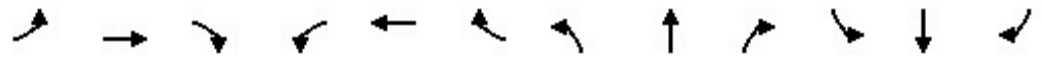
Splits and Phases: 13: Stafford Ave & Stevens St



Lane Group	Ø3
Recall Mode	Ped
Walk Time (s)	7.0
Flash Dont Walk (s)	10.0
Pedestrian Calls (#/hr)	9
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

Farmington Connectivity Study  
 14: S Main St (RT 177) & Mill St

2050 Scenario 2 (Build) Conditions  
 AM PEAK

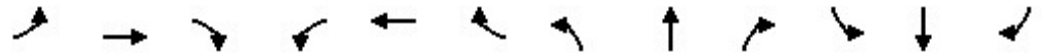


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	42	27	100	80	29	13	112	475	108	5	431	18
Future Volume (vph)	42	27	100	80	29	13	112	475	108	5	431	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		95	0		100	60		0	0		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
Frt			0.850			0.850		0.972			0.994	
Flt Protected		0.970		0.965		0.950			0.950			
Satd. Flow (prot)	0	1807	1583	0	1798	1583	1770	1811	0	1770	1852	0
Flt Permitted		0.700		0.737		0.397			0.351			
Satd. Flow (perm)	0	1304	1583	0	1373	1583	740	1811	0	654	1852	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25		30			25			25		
Link Distance (ft)		906		356			584			461		
Travel Time (s)		24.7		8.1			15.9			12.6		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	44	28	104	83	30	14	117	495	113	5	449	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	72	104	0	113	14	117	608	0	5	468	0
Number of Detectors	1	1	1	1	1	1	1	0		0	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	50	50	20	40	40	50	0		0	0	
Trailing Detector (ft)	0	0	0	0	-10	-10	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	-10	-10	0	0		0	0	
Detector 1 Size(ft)	20	50	50	20	50	50	50	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	pm+ov	Perm	NA	Prot	D.P+P	NA		Perm	NA	
Protected Phases		4	2		4	4	2	12				1
Permitted Phases	4		4	4			1			1		
Detector Phase	4	4	2	4	4	4	2	2		1	1	
Switch Phase												
Minimum Initial (s)	6.0	6.0	5.0	6.0	6.0	6.0	5.0			25.0	25.0	
Minimum Split (s)	10.3	10.3	9.6	10.3	10.3	10.3	9.6			29.6	29.6	
Total Split (s)	21.3	21.3	15.6	21.3	21.3	21.3	15.6			49.6	49.6	
Total Split (%)	19.1%	19.1%	14.0%	19.1%	19.1%	19.1%	14.0%			44.5%	44.5%	
Maximum Green (s)	17.0	17.0	11.0	17.0	17.0	17.0	11.0			45.0	45.0	
Yellow Time (s)	3.2	3.2	3.6	3.2	3.2	3.2	3.6			3.6	3.6	
All-Red Time (s)	1.1	1.1	1.0	1.1	1.1	1.1	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)		4.3	4.6		4.3	4.3	4.6			4.6	4.6	
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag			Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	

Lane Group	Ø3
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)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	25.0
Total Split (s)	25.0
Total Split (%)	22%
Maximum Green (s)	21.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes

Farmington Connectivity Study  
 14: S Main St (RT 177) & Mill St

2050 Scenario 2 (Build) Conditions  
 AM PEAK

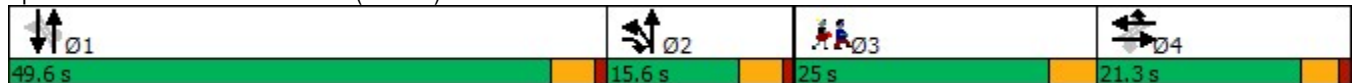


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5			3.0	3.0	
Recall Mode	None	None	None	None	None	None	None			Max	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		10.5	22.3		10.5	10.5	54.4	59.1		46.3	46.3	
Actuated g/C Ratio		0.13	0.27		0.13	0.13	0.66	0.72		0.56	0.56	
v/c Ratio		0.44	0.24		0.65	0.07	0.20	0.47		0.01	0.45	
Control Delay		44.3	21.3		54.2	35.9	8.3	9.1		14.6	15.8	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.3		0.0	0.6	
Total Delay		44.3	21.3		54.2	35.9	8.3	9.4		14.6	16.3	
LOS		D	C		D	D	A	A		B	B	
Approach Delay		30.7			52.2			9.2			16.3	
Approach LOS		C			D			A			B	
Queue Length 50th (ft)		32	37		52	6	11	83		1	111	
Queue Length 95th (ft)		93	68		136	28	69	403		10	376	
Internal Link Dist (ft)		826			276			504			381	
Turn Bay Length (ft)			95			100	60					
Base Capacity (vph)		276	407		291	335	658	1369		367	1039	
Starvation Cap Reductn		0	0		0	0	0	248		0	249	
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		0.26	0.26		0.39	0.04	0.18	0.54		0.01	0.59	

Intersection Summary

Area Type:	Other
Cycle Length:	111.5
Actuated Cycle Length:	82.4
Natural Cycle:	80
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.65
Intersection Signal Delay:	17.6
Intersection LOS:	B
Intersection Capacity Utilization:	76.3%
ICU Level of Service:	D
Analysis Period (min):	15

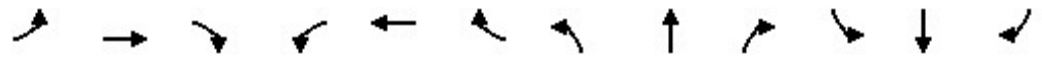
Splits and Phases: 14: S Main St (RT 177) & Mill St



Lane Group	Ø3
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	14.0
Pedestrian Calls (#/hr)	1
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

Farmington Connectivity Study  
 15: S Main St (RT 177) & Railroad Ave/New Britain Ave

2050 Scenario 2 (Build) Conditions  
 AM PEAK

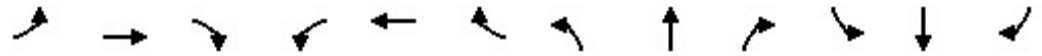


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (vph)	2	6	45	10	1	23	17	616	40	110	626	2
Future Volume (vph)	2	6	45	10	1	23	17	616	40	110	626	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		200	80		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			80			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00		1.00		
Frt		0.885				0.850		0.991				
Flt Protected		0.998			0.957		0.950			0.950		
Satd. Flow (prot)	0	1629	0	0	1765	1568	1752	1825	0	1752	1845	0
Flt Permitted		0.988			0.714		0.326			0.216		
Satd. Flow (perm)	0	1613	0	0	1317	1568	601	1825	0	398	1845	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			30			25				25
Link Distance (ft)		579			590			1222				584
Travel Time (s)		15.8			13.4			33.3				15.9
Confl. Peds. (#/hr)									4	4		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	2	6	46	10	1	24	18	635	41	113	645	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	54	0	0	11	24	18	676	0	113	647	0
Number of Detectors	1	1		1	1	1	0	2		1	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40	40	0	206		50	206	
Trailing Detector (ft)	0	-10		0	-10	-10	0	100		0	100	
Detector 1 Position(ft)	0	-10		0	-10	-10	0	100		0	100	
Detector 1 Size(ft)	20	50		20	50	50	20	6		50	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)								200			200	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		D.P+P	NA	
Protected Phases		4			4	2 4		1		2	1 2	
Permitted Phases	4			4			1			1		
Detector Phase	4	4		4	4	4	1	1		2	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		25.0	25.0		5.0		
Minimum Split (s)	10.2	10.2		10.2	10.2		29.6	29.6		9.6		
Total Split (s)	14.2	14.2		14.2	14.2		74.6	74.6		19.6		

Lane Group	Ø3
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)	
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	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	23.0
Total Split (s)	23.0

Farmington Connectivity Study  
 15: S Main St (RT 177) & Railroad Ave/New Britain Ave

2050 Scenario 2 (Build) Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	10.8%	10.8%		10.8%	10.8%		56.8%	56.8%		14.9%		
Maximum Green (s)	10.0	10.0		10.0	10.0		70.0	70.0		15.0		
Yellow Time (s)	3.2	3.2		3.2	3.2		3.6	3.6		3.6		
All-Red Time (s)	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		
Total Lost Time (s)		4.2			4.2		4.6	4.6		4.6		
Lead/Lag	Lag	Lag		Lag	Lag		Lead	Lead		Lag		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes		
Vehicle Extension (s)	1.5	1.5		1.5	1.5		2.5	2.5		1.5		
Recall Mode	None	None		None	None		Min	Min		None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		7.6			7.6	19.0	31.7	31.7		38.9	45.5	
Actuated g/C Ratio		0.12			0.12	0.31	0.52	0.52		0.64	0.75	
v/c Ratio		0.27			0.07	0.05	0.06	0.71		0.27	0.47	
Control Delay		35.3			34.1	16.9	11.6	19.0		9.6	7.3	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		35.3			34.1	16.9	11.6	19.0		9.6	7.4	
LOS		D			C	B	B	B		A	A	
Approach Delay		35.3			22.3			18.8			7.7	
Approach LOS		D			C			B			A	
Queue Length 50th (ft)		15			3	5	3	146		8	64	
Queue Length 95th (ft)		77			25	26	20	523		54	350	
Internal Link Dist (ft)		499			510			1142			504	
Turn Bay Length (ft)						200	80			120		
Base Capacity (vph)		297			242	581	558	1694		681	1576	
Starvation Cap Reductn		0			0	0	0	0		0	87	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.18			0.05	0.04	0.03	0.40		0.17	0.43	

Intersection Summary

Area Type: Other  
 Cycle Length: 131.4  
 Actuated Cycle Length: 61  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.71  
 Intersection Signal Delay: 14.0  
 Intersection Capacity Utilization 70.5%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service C

Splits and Phases: 15: S Main St (RT 177) & Railroad Ave/New Britain Ave



Lane Group	Ø3
Total Split (%)	18%
Maximum Green (s)	19.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	4
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	62	100	28	757	600	53
Future Volume (vph)	62	100	28	757	600	53
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	0.917				0.989	
Flt Protected	0.981			0.998		
Satd. Flow (prot)	1643	0	0	1823	1807	0
Flt Permitted	0.981			0.998		
Satd. Flow (perm)	1643	0	0	1823	1807	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	805			584	1222	
Travel Time (s)	22.0			15.9	33.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	63	102	29	772	612	54
Shared Lane Traffic (%)						
Lane Group Flow (vph)	165	0	0	801	666	0
Sign Control	Stop			Free	Free	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	78.7%
ICU Level of Service	D
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	5.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	62	100	28	757	600	53
Future Vol, veh/h	62	100	28	757	600	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	63	102	29	772	612	54

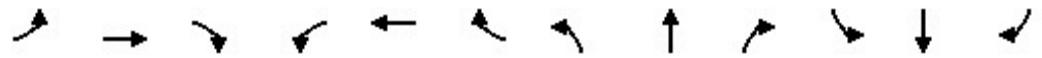
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1469	639	666	0	-	0
Stage 1	639	-	-	-	-	-
Stage 2	830	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.14	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.236	-	-	-
Pot Cap-1 Maneuver	139	472	914	-	-	-
Stage 1	522	-	-	-	-	-
Stage 2	425	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	131	472	914	-	-	-
Mov Cap-2 Maneuver	131	-	-	-	-	-
Stage 1	493	-	-	-	-	-
Stage 2	425	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	49.6	0.3	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	914	-	236	-	-
HCM Lane V/C Ratio	0.031	-	0.7	-	-
HCM Control Delay (s)	9.1	0	49.6	-	-
HCM Lane LOS	A	A	E	-	-
HCM 95th %tile Q(veh)	0.1	-	4.6	-	-

Farmington Connectivity Study  
 17: Plainville Ave (RT 177) & Coopermine Rd

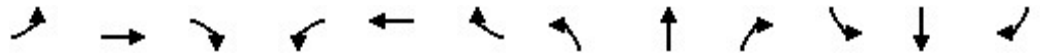
2050 Scenario 2 (Build) Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	158	89	73	65	31	18	41	584	63	45	720	90
Future Volume (vph)	158	89	73	65	31	18	41	584	63	45	720	90
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	1.00	1.00	1.00	1.00	1.00
Frt		0.969			0.979			0.988			0.986	
Flt Protected		0.976			0.972			0.997			0.997	
Satd. Flow (prot)	0	1779	0	0	1790	0	0	1853	0	0	1849	0
Flt Permitted		0.786			0.656			0.901			0.925	
Satd. Flow (perm)	0	1433	0	0	1208	0	0	1675	0	0	1716	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			9			8			9	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		498			472			529			491	
Travel Time (s)		9.7			9.2			10.3			9.6	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	180	101	83	74	35	20	47	664	72	51	818	102
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	364	0	0	129	0	0	783	0	0	971	0
Number of Detectors	1	3		1	3		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	24		20	24		20	361		20	361	
Trailing Detector (ft)	0	-10		0	-10		0	185		0	185	
Detector 1 Position(ft)	0	-10		0	-10		0	185		0	185	
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)		6			6			355			355	
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	
Detector 3 Position(ft)		18			18							
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	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	20.5	20.5		20.5	20.5		21.9	21.9		21.9	21.9	
Total Split (s)	40.5	40.5		40.5	40.5		66.9	66.9		66.9	66.9	

Farmington Connectivity Study  
 17: Plainville Ave (RT 177) & Coopermine Rd

2050 Scenario 2 (Build) Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	37.7%	37.7%		37.7%	37.7%		62.3%	62.3%		62.3%	62.3%	
Maximum Green (s)	35.0	35.0		35.0	35.0		60.0	60.0		60.0	60.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		4.4	4.4		4.4	4.4	
All-Red Time (s)	2.2	2.2		2.2	2.2		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.5			5.5			6.9			6.9	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5		1.5	1.5		5.0	5.0		5.0	5.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	14.0	14.0		14.0	14.0							
Flash Dont Walk (s)	1.0	1.0		1.0	1.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		27.9			27.9			60.2			60.2	
Actuated g/C Ratio		0.28			0.28			0.60			0.60	
v/c Ratio		0.89			0.38			0.78			0.94	
Control Delay		57.9			30.0			23.5			38.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		57.9			30.0			23.5			38.4	
LOS		E			C			C			D	
Approach Delay		57.9			30.0			23.5			38.4	
Approach LOS		E			C			C			D	
Queue Length 50th (ft)		215			62			361			551	
Queue Length 95th (ft)		#325			111			586			#913	
Internal Link Dist (ft)		418			392			449			411	
Turn Bay Length (ft)												
Base Capacity (vph)		510			427			1006			1031	
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		0.71			0.30			0.78			0.94	

Intersection Summary

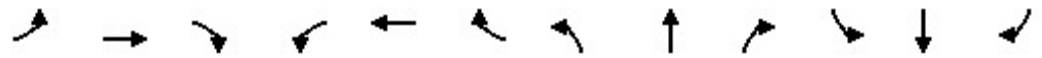
Area Type: Other  
 Cycle Length: 107.4  
 Actuated Cycle Length: 100.6  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.94  
 Intersection Signal Delay: 35.9  
 Intersection LOS: D  
 Intersection Capacity Utilization 88.3%  
 ICU Level of Service E  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 17: Plainville Ave (RT 177) & Coopermine Rd



Farmington Connectivity Study  
 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd

2050 Scenario 2 (Build) Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (vph)	48	211	289	22	60	39	114	564	36	91	887	24
Future Volume (vph)	48	211	289	22	60	39	114	564	36	91	887	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	250		0	80		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			100			40		
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		0.929			0.956			0.991			0.996	
Flt Protected		0.996			0.991		0.950			0.950		
Satd. Flow (prot)	0	1724	0	0	1765	0	1770	1846	0	1770	1855	0
Flt Permitted		0.962			0.700		0.063			0.311		
Satd. Flow (perm)	0	1665	0	0	1247	0	117	1846	0	579	1855	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					19			4				2
Link Speed (mph)		30			30			45				45
Link Distance (ft)		594			761			713				527
Travel Time (s)		13.5			17.3			10.8				8.0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	49	215	295	22	61	40	116	576	37	93	905	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	559	0	0	123	0	116	613	0	93	929	0
Number of Detectors	1	3		1	2		3	1		3	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	18		20	12		24	356		24	206	
Trailing Detector (ft)	0	-10		0	-6		-6	350		-6	200	
Detector 1 Position(ft)	0	-10		0	-6		-6	350		-6	200	
Detector 1 Size(ft)	20	6		20	6		6	6		6	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)		0			6		6			6		
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		
Detector 3 Position(ft)		12					18			18		
Detector 3 Size(ft)		6					6			6		
Detector 3 Type		Cl+Ex					Cl+Ex			Cl+Ex		
Detector 3 Channel												
Detector 3 Extend (s)		0.0					0.0			0.0		
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		3.0	30.0		3.0	30.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	30.9	30.9		30.9	30.9		7.0	37.1		7.0	37.1	
Total Split (s)	34.9	34.9		34.9	34.9		19.0	67.1		12.0	67.1	
Total Split (%)	28.8%	28.8%		28.8%	28.8%		15.7%	55.5%		9.9%	55.5%	
Maximum Green (s)	30.0	30.0		30.0	30.0		15.0	60.0		8.0	60.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.0	4.4		3.0	4.4	
All-Red Time (s)	1.6	1.6		1.6	1.6		1.0	2.7		1.0	2.7	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.9			4.9		4.0	7.1		4.0	7.1	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)	25.0	25.0		25.0	25.0							
Flash Dont Walk (s)	1.0	1.0		1.0	1.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		30.0			30.0		75.8	63.2		69.8	60.1	
Actuated g/C Ratio		0.26			0.26		0.65	0.55		0.60	0.52	
v/c Ratio		1.30			0.36		0.54	0.61		0.22	0.97	
Control Delay		186.3			33.8		24.4	21.1		8.5	50.0	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		186.3			33.8		24.4	21.1		8.5	50.0	
LOS		F			C		C	C		A	D	
Approach Delay		186.3			33.8			21.6			46.2	
Approach LOS		F			C			C			D	
Queue Length 50th (ft)		~533			63		29	296		22	641	
Queue Length 95th (ft)		#784			126		89	421		41	#1001	
Internal Link Dist (ft)		514			681			633			447	
Turn Bay Length (ft)							250			80		
Base Capacity (vph)		431			337		291	1069		437	962	
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		1.30			0.36		0.40	0.57		0.21	0.97	

Intersection Summary

Area Type:	Other
Cycle Length:	121
Actuated Cycle Length:	115.9
Natural Cycle:	100
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.30
Intersection Signal Delay:	70.4
Intersection LOS:	E
Intersection Capacity Utilization:	103.7%
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.	

Splits and Phases: 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd



Farmington Connectivity Study  
 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)

2050 Scenario 2 (Build) Conditions  
 AM PEAK

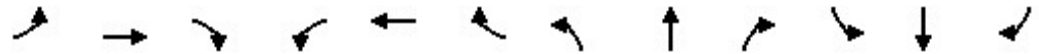


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	96	708	176	109	283	72	102	533	142	256	897	71
Future Volume (vph)	96	708	176	109	283	72	102	533	142	256	897	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260		260	180		0	250		250	165		165
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (ft)	190			170			150			115		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor				1.00			1.00			1.00	1.00	
Frt			0.850		0.970				0.850		0.989	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	3433	0	1770	1863	1583	1770	3496	0
Flt Permitted	0.950			0.950			0.113			0.102		
Satd. Flow (perm)	1770	1863	1583	1767	3433	0	210	1863	1583	190	3496	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			106		20				101		5	
Link Speed (mph)		45			45			40			45	
Link Distance (ft)		780			1567			643			474	
Travel Time (s)		11.8			23.7			11.0			7.2	
Confl. Peds. (#/hr)			1	1			3		1	1		3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	103	761	189	117	304	77	110	573	153	275	965	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	103	761	189	117	381	0	110	573	153	275	1041	0
Number of Detectors	3	2	2	3	2		3	3	3	3	3	
Detector Template												
Leading Detector (ft)	24	306	306	24	306		24	24	24	24	24	
Trailing Detector (ft)	-6	150	150	-6	150		-6	-6	-6	-6	-6	
Detector 1 Position(ft)	-6	150	150	-6	150		-6	-6	-6	-6	-6	
Detector 1 Size(ft)	6	6	6	6	6		6	6	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	6	300	300	6	300		6	6	6	6	6	
Detector 2 Size(ft)	6	6	6	6	6		6	6	6	6	6	
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 3 Position(ft)	18			18			18	18	18	18	18	
Detector 3 Size(ft)	6			6			6	6	6	6	6	
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0	0.0	0.0	0.0	
Turn Type	Prot	NA	Prot	Prot	NA		pm+pt	NA	pt+ov	pm+pt	NA	
Protected Phases	1	6	6	5	2		3	8	5 8	7	4	
Permitted Phases							8			4		
Detector Phase	1	6	6	5	2		3	8	8	7	4	

Lane Group	Ø9
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	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	

Farmington Connectivity Study  
 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)

2050 Scenario 2 (Build) Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
<b>Switch Phase</b>												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0		5.0	9.0		5.0	9.0	
Minimum Split (s)	9.0	20.2	20.2	9.0	20.2		9.0	14.7		9.0	14.7	
Total Split (s)	14.0	45.2	45.2	14.0	35.2		19.0	40.7		19.0	40.7	
Total Split (%)	9.3%	30.0%	30.0%	9.3%	23.3%		12.6%	27.0%		12.6%	27.0%	
Maximum Green (s)	10.0	40.0	40.0	10.0	30.0		15.0	35.0		15.0	35.0	
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2		3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.2		1.0	1.2	
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)	4.0	5.2	5.2	4.0	5.2		4.0	5.7		4.0	5.7	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	2.5	2.5	1.5	2.5		2.0	3.0		2.0	2.0	
Recall Mode	None	Min	Min	None	Min		None	None		None	None	
<b>Walk Time (s)</b>												
<b>Flash Dont Walk (s)</b>												
<b>Pedestrian Calls (#/hr)</b>												
Act Effct Green (s)	9.8	40.4	40.4	10.1	40.6		46.4	35.3	50.5	55.5	41.1	
Actuated g/C Ratio	0.08	0.32	0.32	0.08	0.32		0.37	0.28	0.40	0.44	0.33	
v/c Ratio	0.75	1.27	0.33	0.82	0.34		0.57	1.09	0.22	1.00	0.91	
Control Delay	88.0	170.2	17.3	97.3	32.9		35.2	108.9	8.6	88.8	52.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	88.0	170.2	17.3	97.3	32.9		35.2	108.9	8.6	88.8	52.3	
LOS	F	F	B	F	C		D	F	A	F	D	
Approach Delay		134.7			48.1			80.8			59.9	
Approach LOS		F			D			F			E	
Queue Length 50th (ft)	78	~715	44	90	107		47	~477	23	158	386	
Queue Length 95th (ft)	#221	#1302	138	#256	206		120	#965	59	#478	#822	
Internal Link Dist (ft)		700			1487			563			394	
Turn Bay Length (ft)	260		260	180			250		250	165		
Base Capacity (vph)	142	599	581	142	1127		276	525	697	275	1150	
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	0.73	1.27	0.33	0.82	0.34		0.40	1.09	0.22	1.00	0.91	










**Intersection Summary**

Area Type: Other  
 Cycle Length: 150.9  
 Actuated Cycle Length: 125.3  
 Natural Cycle: 145  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.27  
 Intersection Signal Delay: 84.3  
 Intersection LOS: F  
 Intersection Capacity Utilization 101.3%  
 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.

Lane Group	Ø9
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	32.0
Total Split (s)	32.0
Total Split (%)	21%
Maximum Green (s)	28.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
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)	21.0
Pedestrian Calls (#/hr)	7
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

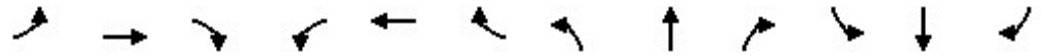
Queue shown is maximum after two cycles.

Splits and Phases: 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)

 Ø1	 Ø2	 Ø3	 Ø4	 Ø9
14 s	35.2 s	19 s	40.7 s	32 s
 Ø5	 Ø6	 Ø7	 Ø8	
14 s	45.2 s	19 s	40.7 s	

Farmington Connectivity Study  
 20: Unionville Ave (RT 177) & Northwest Dr

2050 Scenario 2 (Build) Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	188	86	33	138	48	222	576	152	118	831	71
Future Volume (vph)	39	188	86	33	138	48	222	576	152	118	831	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	210		0	260		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
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		0.953			0.961			0.969			0.988	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	1741	0	1736	1756	0	1736	3364	0	1736	3429	0
Flt Permitted	0.560			0.375			0.148			0.249		
Satd. Flow (perm)	1023	1741	0	685	1756	0	270	3364	0	455	3429	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			12			25			7	
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		710			592			572			675	
Travel Time (s)		13.8			11.5			9.8			11.5	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	44	211	97	37	155	54	249	647	171	133	934	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	308	0	37	209	0	249	818	0	133	1014	0
Number of Detectors	3	3		3	3		3	2		3	2	
Detector Template												
Leading Detector (ft)	24	24		24	24		24	331		24	331	
Trailing Detector (ft)	-6	-6		-6	-6		-6	150		-6	150	
Detector 1 Position(ft)	-6	-6		-6	-6		-6	150		-6	150	
Detector 1 Size(ft)	6	6		6	6		6	6		6	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)	6	6		6	6		6	325		6	325	
Detector 2 Size(ft)	6	6		6	6		6	6		6	6	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 3 Position(ft)	18	18		18	18		18			18		
Detector 3 Size(ft)	6	6		6	6		6			6		
Detector 3 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex		
Detector 3 Channel												
Detector 3 Extend (s)	0.0	0.0		0.0	0.0		0.0			0.0		
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	
Switch Phase												

Lane Group	Ø9
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)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	












Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	9.0		4.0	9.0		4.0	15.0		4.0	15.0	
Minimum Split (s)	8.0	15.2		8.0	15.2		8.0	22.5		8.0	22.5	
Total Split (s)	14.0	23.2		12.0	21.2		12.0	27.5		18.0	33.5	
Total Split (%)	12.1%	20.1%		10.4%	18.3%		10.4%	23.8%		15.6%	29.0%	
Maximum Green (s)	10.0	17.0		8.0	15.0		8.0	20.0		14.0	26.0	
Yellow Time (s)	3.0	4.1		3.0	4.1		3.0	4.8		3.0	4.8	
All-Red Time (s)	1.0	2.1		1.0	2.1		1.0	2.7		1.0	2.7	
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	6.2		4.0	6.2		4.0	7.5		4.0	7.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	3.0		1.5	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	23.0	17.1		22.6	16.9		38.6	27.0		36.8	26.1	
Actuated g/C Ratio	0.31	0.23		0.30	0.23		0.52	0.36		0.49	0.35	
v/c Ratio	0.12	0.75		0.13	0.52		0.84	0.67		0.39	0.84	
Control Delay	17.1	40.1		17.3	30.4		41.6	24.0		12.6	31.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	17.1	40.1		17.3	30.4		41.6	24.0		12.6	31.6	
LOS	B	D		B	C		D	C		B	C	
Approach Delay		37.2			28.4			28.2			29.4	
Approach LOS		D			C			C			C	
Queue Length 50th (ft)	14	135		11	86		63	173		31	242	
Queue Length 95th (ft)	33	#262		30	153		#205	251		60	#361	
Internal Link Dist (ft)		630			512			492			595	
Turn Bay Length (ft)							210			260		
Base Capacity (vph)	435	410		329	405		296	1230		494	1201	
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	0.10	0.75		0.11	0.52		0.84	0.67		0.27	0.84	

**Intersection Summary**

Area Type: Other  
 Cycle Length: 115.7  
 Actuated Cycle Length: 74.8  
 Natural Cycle: 150  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.84  
 Intersection Signal Delay: 29.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 74.1%  
 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: 20: Unionville Ave (RT 177) & Northwest Dr

Ø1 	Ø2 	Ø3 	Ø4 	Ø9 
12 s	33.5 s	12 s	23.2 s	35 s
Ø5 	Ø6 	Ø7 	Ø8 	
18 s	27.5 s	14 s	21.2 s	

Lane Group	Ø9
Minimum Initial (s)	1.0
Minimum Split (s)	35.0
Total Split (s)	35.0
Total Split (%)	30%
Maximum Green (s)	31.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
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)	24.0
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	
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	
<b>Intersection Summary</b>	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	22	237	85	6	47	87	21	124	6	151	153	11
Future Volume (vph)	22	237	85	6	47	87	21	124	6	151	153	11
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	1.00	1.00	1.00	1.00	1.00
Frt		0.967			0.916			0.994			0.995	
Flt Protected		0.997			0.998			0.993			0.977	
Satd. Flow (prot)	0	1778	0	0	1686	0	0	1821	0	0	1793	0
Flt Permitted		0.997			0.998			0.993			0.977	
Satd. Flow (perm)	0	1778	0	0	1686	0	0	1821	0	0	1793	0
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		506			528			2775			437	
Travel Time (s)		9.9			10.3			63.1			9.9	
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 (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	24	258	92	7	51	95	23	135	7	164	166	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	374	0	0	153	0	0	165	0	0	342	0
Sign Control		Stop			Stop			Stop			Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	61.3%
ICU Level of Service	B
Analysis Period (min)	15

Intersection	
Intersection Delay, s/veh	14.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	22	237	85	6	47	87	21	124	6	151	153	11
Future Vol, veh/h	22	237	85	6	47	87	21	124	6	151	153	11
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, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	24	258	92	7	51	95	23	135	7	164	166	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	16.2	10.8	11.6	16.1
HCM LOS	C	B	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	6%	4%	48%
Vol Thru, %	82%	69%	34%	49%
Vol Right, %	4%	25%	62%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	151	344	140	315
LT Vol	21	22	6	151
Through Vol	124	237	47	153
RT Vol	6	85	87	11
Lane Flow Rate	164	374	152	342
Geometry Grp	1	1	1	1
Degree of Util (X)	0.279	0.581	0.245	0.556
Departure Headway (Hd)	6.122	5.596	5.794	5.844
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	581	639	613	613
Service Time	4.216	3.673	3.891	3.92
HCM Lane V/C Ratio	0.282	0.585	0.248	0.558
HCM Control Delay	11.6	16.2	10.8	16.1
HCM Lane LOS	B	C	B	C
HCM 95th-tile Q	1.1	3.7	1	3.4



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	117	140	119	11	72	0	45	131	4	0	166	82
Future Volume (vph)	117	140	119	11	72	0	45	131	4	0	166	82
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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.957						0.997			0.955	
Flt Protected		0.985			0.993			0.988				
Satd. Flow (prot)	0	1706	0	0	1797	0	0	1782	0	0	1728	0
Flt Permitted		0.985			0.993			0.988				
Satd. Flow (perm)	0	1706	0	0	1797	0	0	1782	0	0	1728	0
Link Speed (mph)		30			35			30			30	
Link Distance (ft)		414			396			469			2775	
Travel Time (s)		9.4			7.7			10.7			63.1	
Confl. Peds. (#/hr)							2		1	1		2
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	144	173	147	14	89	0	56	162	5	0	205	101
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	464	0	0	103	0	0	223	0	0	306	0
Sign Control		Stop			Stop			Stop			Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	61.3%
ICU Level of Service	B
Analysis Period (min)	15

Intersection	
Intersection Delay, s/veh	18
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	117	140	119	11	72	0	45	131	4	0	166	82
Future Vol, veh/h	117	140	119	11	72	0	45	131	4	0	166	82
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	144	173	147	14	89	0	56	162	5	0	205	101
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

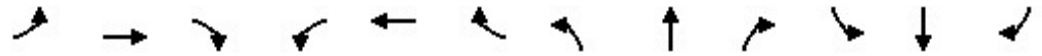
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	23.5	11.3	13.6	15.2
HCM LOS	C	B	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	31%	13%	0%
Vol Thru, %	73%	37%	87%	67%
Vol Right, %	2%	32%	0%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	180	376	83	248
LT Vol	45	117	11	0
Through Vol	131	140	72	166
RT Vol	4	119	0	82
Lane Flow Rate	222	464	102	306
Geometry Grp	1	1	1	1
Degree of Util (X)	0.395	0.743	0.189	0.511
Departure Headway (Hd)	6.407	5.762	6.654	6.012
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	560	631	538	600
Service Time	4.456	3.762	4.707	4.057
HCM Lane V/C Ratio	0.396	0.735	0.19	0.51
HCM Control Delay	13.6	23.5	11.3	15.2
HCM Lane LOS	B	C	B	C
HCM 95th-tile Q	1.9	6.5	0.7	2.9

Farmington Connectivity Study  
 23: New Britain Ave & Scott Swamp Rd (US 6)

2050 Scenario 2 (Build) Conditions

AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	824	35	10	522	109	37	66	13	134	83	47
Future Volume (vph)	41	824	35	10	522	109	37	66	13	134	83	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	340		0	100		320	190		0	120		0
Storage Lanes	1		0	1		1	1		0	2		0
Taper Length (ft)	150			100			100			110		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.994				0.850		0.976			0.946	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3518	0	1770	3539	1583	1770	1818	0	3433	1762	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3518	0	1770	3539	1583	1770	1818	0	3433	1762	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				128		10			30	
Link Speed (mph)		45			45			25			35	
Link Distance (ft)		3978			920			676			631	
Travel Time (s)		60.3			13.9			18.4			12.3	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	48	969	41	12	614	128	44	78	15	158	98	55
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	1010	0	12	614	128	44	93	0	158	153	0
Number of Detectors	3	0		3	0	0	3	3		3	3	
Detector Template												
Leading Detector (ft)	24	0		24	0	0	24	24		24	24	
Trailing Detector (ft)	-10	0		-10	0	0	-6	-6		-6	-6	
Detector 1 Position(ft)	-10	0		-10	0	0	-6	-6		-6	-6	
Detector 1 Size(ft)	6	6		6	6	20	6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
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)	6			6			6	6		6	6	
Detector 2 Size(ft)	6			6			6	6		6	6	
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0		0.0	0.0	
Detector 3 Position(ft)	18			18			18	18		18	18	
Detector 3 Size(ft)	6			6			6	6		6	6	
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0		0.0	0.0	
Turn Type	Prot	NA		Prot	NA	pt+ov	Split	NA		Split	NA	
Protected Phases	1	6		5	2	2 7	8	8		7	7	
Permitted Phases												
Detector Phase	1	6		5	2	2	8	8		7	7	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0		7.0	7.0	

Farmington Connectivity Study  
 23: New Britain Ave & Scott Swamp Rd (US 6)

2050 Scenario 2 (Build) Conditions  
 AM PEAK

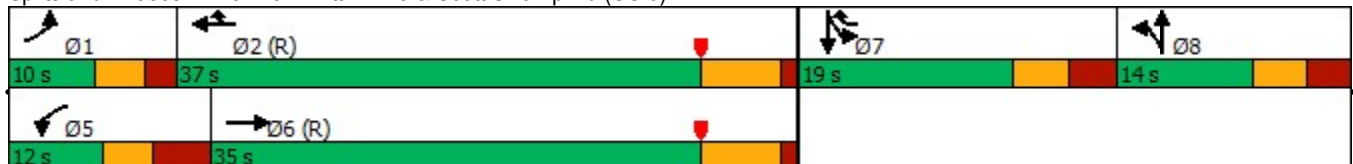


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.9	20.8		11.4	20.8		34.0	34.0		13.2	13.2	
Total Split (s)	10.0	35.0		12.0	37.0		14.0	14.0		19.0	19.0	
Total Split (%)	12.5%	43.8%		15.0%	46.3%		17.5%	17.5%		23.8%	23.8%	
Maximum Green (s)	5.1	29.2		5.6	31.2		8.0	8.0		12.8	12.8	
Yellow Time (s)	3.0	4.8		3.0	4.8		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.9	1.0		3.4	1.0		2.7	2.7		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.9	5.8		6.4	5.8		6.0	6.0		6.2	6.2	
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)							27.0	27.0				
Flash Dont Walk (s)							1.0	1.0				
Pedestrian Calls (#/hr)							0	0				
Act Effct Green (s)	5.5	44.5		5.3	40.6	57.9	7.3	7.3		10.0	10.0	
Actuated g/C Ratio	0.07	0.56		0.07	0.51	0.72	0.09	0.09		0.12	0.12	
v/c Ratio	0.40	0.52		0.10	0.34	0.11	0.27	0.53		0.37	0.62	
Control Delay	45.8	14.7		33.9	15.7	4.5	37.8	42.1		33.9	37.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	45.8	14.7		33.9	15.7	4.5	37.8	42.1		33.9	37.4	
LOS	D	B		C	B	A	D	D		C	D	
Approach Delay		16.1			14.1			40.7			35.6	
Approach LOS		B			B			D			D	
Queue Length 50th (ft)	23	155		6	87	0	21	40		38	59	
Queue Length 95th (ft)	53	280		22	183	57	48	80		59	105	
Internal Link Dist (ft)		3898			840			596			551	
Turn Bay Length (ft)	340			100		320	190			120		
Base Capacity (vph)	121	1958		123	1794	1182	180	194		549	307	
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	0.40	0.52		0.10	0.34	0.11	0.24	0.48		0.29	0.50	

Intersection Summary

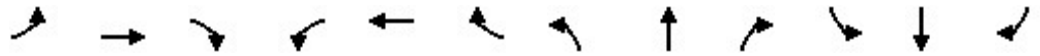
Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 43 (54%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.62  
 Intersection Signal Delay: 19.6  
 Intersection Capacity Utilization 59.8%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service B

Splits and Phases: 23: New Britain Ave & Scott Swamp Rd (US 6)



Farmington Connectivity Study  
 24: Hyde Rd & Scott Swamp Rd (US 6)

2050 Scenario 2 (Build) Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	1063	7	146	601	20	3	5	51	2	1	1
Future Volume (vph)	9	1063	7	146	601	20	3	5	51	2	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		0	360		0	0		0	0		0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	100			65			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.995				0.850			0.850
Flt Protected	0.950			0.950				0.980			0.968	
Satd. Flow (prot)	1787	3571	0	1787	3556	0	0	1844	1599	0	1821	1599
Flt Permitted	0.950			0.950								
Satd. Flow (perm)	1787	3571	0	1787	3556	0	0	1881	1599	0	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			7				52			113
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1090			523			762			370	
Travel Time (s)		16.5			7.9			20.8			10.1	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	11	1251	8	172	707	24	4	6	60	2	1	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	1259	0	172	731	0	0	10	60	0	3	1
Number of Detectors	3	0		3	0		1	3	3	1	3	3
Detector Template							Left			Left		
Leading Detector (ft)	24	0		24	0		20	24	24	20	24	24
Trailing Detector (ft)	-10	0		-10	0		0	-10	-10	0	-10	-10
Detector 1 Position(ft)	-10	0		-10	0		0	-10	-10	0	-10	-10
Detector 1 Size(ft)	6	6		6	6		20	6	6	20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	6			6			6	6	6		6	6
Detector 2 Size(ft)	6			6			6	6	6		6	6
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0	0.0		0.0	0.0
Detector 3 Position(ft)	18			18			18	18	18		18	18
Detector 3 Size(ft)	6			6			6	6	6		6	6
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	NA		Prot	NA		Perm	NA	pm+ov	Perm	NA	Perm
Protected Phases	1	6		5	2			4	5		4	
Permitted Phases							4		4	4		4
Detector Phase	1	6		5	2		4	4	5	4	4	4
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0		7.0	7.0	5.0	7.0	7.0	7.0
Minimum Split (s)	10.5	21.8		10.5	21.8		30.5	30.5	10.5	30.5	30.5	30.5
Total Split (s)	15.0	50.0		15.0	50.0		15.0	15.0	15.0	15.0	15.0	15.0
Total Split (%)	18.8%	62.5%		18.8%	62.5%		18.8%	18.8%	18.8%	18.8%	18.8%	18.8%
Maximum Green (s)	9.5	44.2		9.5	44.2		9.5	9.5	9.5	9.5	9.5	9.5
Yellow Time (s)	3.0	4.8		3.0	4.8		3.3	3.3	3.0	3.3	3.3	3.3
All-Red Time (s)	2.5	1.0		2.5	1.0		2.2	2.2	2.5	2.2	2.2	2.2
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)	5.5	5.8		5.5	5.8		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	None
Walk Time (s)		15.0			15.0		24.0	24.0		24.0	24.0	24.0
Flash Dont Walk (s)		1.0			1.0		1.0	1.0		1.0	1.0	1.0
Pedestrian Calls (#/hr)		0			0		0	0		0	0	0
Act Effct Green (s)	5.4	52.3		11.4	70.3			7.0	16.4		7.0	7.0
Actuated g/C Ratio	0.07	0.65		0.14	0.88		0.09	0.20		0.09	0.09	0.09
v/c Ratio	0.09	0.54		0.68	0.23		0.06	0.16		0.02	0.02	0.00
Control Delay	43.7	4.4		43.7	4.0		34.5	8.9		33.7	0.0	0.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	43.7	4.4		43.7	4.0		34.5	8.9		33.7	0.0	0.0
LOS	D	A		D	A		C	A		C	C	A
Approach Delay		4.8			11.5		12.5			25.3		
Approach LOS		A			B		B			C		
Queue Length 50th (ft)	6	24		84	0		5	3		1	0	0
Queue Length 95th (ft)	m14	50		#140	116		18	26		9	0	0
Internal Link Dist (ft)		1010			443		682			290		
Turn Bay Length (ft)	130			360								
Base Capacity (vph)	212	2334		259	3126		223	373		223	289	
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	0.05	0.54		0.66	0.23		0.04	0.16		0.01	0.00	

**Intersection Summary**

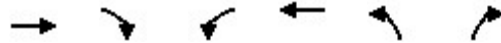
Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 2 (3%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.68  
 Intersection Signal Delay: 7.8 Intersection LOS: A  
 Intersection Capacity Utilization 57.5% 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: 24: Hyde Rd & Scott Swamp Rd (US 6)

 Ø1	 Ø2 (R)	 Ø4
15 s	50 s	15 s
 Ø5	 Ø6 (R)	
15 s	50 s	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓↓↓	
Traffic Volume (vph)	928	190	106	701	176	15
Future Volume (vph)	928	190	106	701	176	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		350	350		380	0
Storage Lanes		1	1		1	0
Taper Length (ft)			100		130	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	0.95
Frt		0.850			0.988	
Flt Protected			0.950		0.956	
Satd. Flow (prot)	3539	1583	1770	3539	3413	0
Flt Permitted			0.950		0.956	
Satd. Flow (perm)	3539	1583	1770	3539	3413	0
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			45	30	
Link Distance (ft)	1087			600	782	
Travel Time (s)	16.5			9.1	17.8	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	1092	224	125	825	207	18
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1092	224	125	825	225	0
Number of Detectors	0	0	3	0	1	
Detector Template						
Leading Detector (ft)	0	0	24	0	56	
Trailing Detector (ft)	0	0	-10	0	50	
Detector 1 Position(ft)	0	0	-10	0	50	
Detector 1 Size(ft)	6	20	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)			6			
Detector 2 Size(ft)			6			
Detector 2 Type			Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)			0.0			
Detector 3 Position(ft)			18			
Detector 3 Size(ft)			6			
Detector 3 Type			Cl+Ex			
Detector 3 Channel						
Detector 3 Extend (s)			0.0			
Turn Type	NA	pm+ov	Prot	NA	Prot	
Protected Phases	2	3	1	12	3	
Permitted Phases		2				
Detector Phase	2	3	1	2	3	
Switch Phase						
Minimum Initial (s)	15.0	7.0	5.0		7.0	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	21.0	29.5	9.0		29.5	
Total Split (s)	50.0	15.0	15.0		15.0	
Total Split (%)	62.5%	18.8%	18.8%		18.8%	
Maximum Green (s)	44.0	9.5	11.0		9.5	
Yellow Time (s)	5.0	3.0	3.0		3.0	
All-Red Time (s)	1.0	2.5	1.0		2.5	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.0	5.5	4.0		5.5	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	2.0		3.0	
Recall Mode	C-Max	None	Min		None	
Walk Time (s)		23.0			23.0	
Flash Dont Walk (s)		1.0			1.0	
Pedestrian Calls (#/hr)		0			0	
Act Effct Green (s)	46.5	61.3	9.2	61.8	8.7	
Actuated g/C Ratio	0.58	0.77	0.12	0.77	0.11	
v/c Ratio	0.53	0.18	0.61	0.30	0.60	
Control Delay	8.1	3.9	46.4	3.1	41.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	8.1	3.9	46.4	3.1	41.2	
LOS	A	A	D	A	D	
Approach Delay	7.4			8.8	41.2	
Approach LOS	A			A	D	
Queue Length 50th (ft)	221	71	60	51	55	
Queue Length 95th (ft)	54	20	105	63	85	
Internal Link Dist (ft)	1007			520	702	
Turn Bay Length (ft)		350	350		380	
Base Capacity (vph)	2058	1227	243	2732	405	
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	0.53	0.18	0.51	0.30	0.56	

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 34 (43%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.61  
 Intersection Signal Delay: 11.0  
 Intersection Capacity Utilization 50.3%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service A

Splits and Phases: 25: Scott Swamp Rd (RT 552) & Scott Swamp Rd (US 6)/Colt Hwy (US 6)





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3
Lane Configurations							
Traffic Volume (vph)	329	118	87	376	268	91	
Future Volume (vph)	329	118	87	376	268	91	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor				1.00	0.99		
Frt	0.964				0.966		
Flt Protected	0.964			0.991			
Satd. Flow (prot)	1714	0	0	1828	1771	0	
Flt Permitted	0.964			0.557			
Satd. Flow (perm)	1714	0	0	1027	1771	0	
Right Turn on Red		No				Yes	
Satd. Flow (RTOR)					16		
Link Speed (mph)	30			30	30		
Link Distance (ft)	345			413	499		
Travel Time (s)	7.8			9.4	11.3		
Confl. Peds. (#/hr)			3			3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	
Adj. Flow (vph)	366	131	97	418	298	101	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	497	0	0	515	399	0	
Number of Detectors	2		1	1	1		
Detector Template			Left				
Leading Detector (ft)	18		20	206	206		
Trailing Detector (ft)	0		0	200	200		
Detector 1 Position(ft)	0		0	200	200		
Detector 1 Size(ft)	6		20	6	6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		
Detector 2 Position(ft)	12						
Detector 2 Size(ft)	6						
Detector 2 Type	Cl+Ex						
Detector 2 Channel							
Detector 2 Extend (s)	0.0						
Turn Type	Prot		D.P+P	NA	NA		
Protected Phases	4		1	12	2	3	
Permitted Phases			2				
Detector Phase	4		1	1	2		
Switch Phase							
Minimum Initial (s)	5.0		3.0		15.0	1.0	
Minimum Split (s)	9.0		7.0		22.2	25.0	
Total Split (s)	34.0		12.0		39.2	25.0	
Total Split (%)	30.9%		10.9%		35.6%	23%	
Maximum Green (s)	30.0		8.0		32.0	21.0	
Yellow Time (s)	3.0		3.0		4.1	4.0	

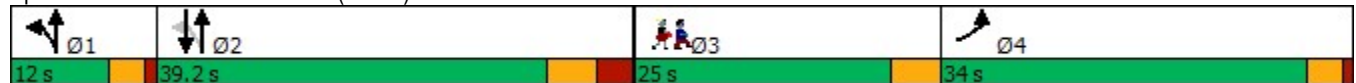


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3
All-Red Time (s)	1.0		1.0		3.1		0.0
Lost Time Adjust (s)	0.0				0.0		
Total Lost Time (s)	4.0				7.2		
Lead/Lag	Lag		Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	3.0		3.0		5.0		3.0
Recall Mode	None		Max		Min		None
Walk Time (s)							7.0
Flash Dont Walk (s)							14.0
Pedestrian Calls (#/hr)							3
Act Effct Green (s)	31.0			32.0	20.4		
Actuated g/C Ratio	0.39			0.41	0.26		
v/c Ratio	0.74			1.03	0.85		
Control Delay	32.0			71.4	45.2		
Queue Delay	0.0			0.0	0.0		
Total Delay	32.0			71.4	45.2		
LOS	C			E	D		
Approach Delay	32.0			71.4	45.2		
Approach LOS	C			E	D		
Queue Length 50th (ft)	175			160	161		
Queue Length 95th (ft)	#594			#627	#368		
Internal Link Dist (ft)	265			333	419		
Turn Bay Length (ft)							
Base Capacity (vph)	672			499	750		
Starvation Cap Reductn	0			0	0		
Spillback Cap Reductn	0			0	0		
Storage Cap Reductn	0			0	0		
Reduced v/c Ratio	0.74			1.03	0.53		

**Intersection Summary**

Area Type: Other  
 Cycle Length: 110.2  
 Actuated Cycle Length: 78.9  
 Natural Cycle: 130  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 1.03  
 Intersection Signal Delay: 50.1  
 Intersection LOS: D  
 Intersection Capacity Utilization 82.4%  
 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: 26: Main St (RT 10) & Meadow Rd





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	30	52	21	205	293	13
Future Volume (vph)	30	52	21	205	293	13
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	0.914				0.994	
Flt Protected	0.982			0.995		
Satd. Flow (prot)	1672	0	0	1853	1852	0
Flt Permitted	0.982			0.995		
Satd. Flow (perm)	1672	0	0	1853	1852	0
Link Speed (mph)	25			30	30	
Link Distance (ft)	506			401	691	
Travel Time (s)	13.8			9.1	15.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	57	23	223	318	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	90	0	0	246	332	0
Sign Control	Stop			Free	Free	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	39.8%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	30	52	21	205	293	13
Future Vol, veh/h	30	52	21	205	293	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	57	23	223	318	14

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	594	325	332	0	0
Stage 1	325	-	-	-	-
Stage 2	269	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	468	716	1227	-	-
Stage 1	732	-	-	-	-
Stage 2	776	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	458	716	1227	-	-
Mov Cap-2 Maneuver	458	-	-	-	-
Stage 1	717	-	-	-	-
Stage 2	776	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.1	0.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1227	-	594	-	-
HCM Lane V/C Ratio	0.019	-	0.15	-	-
HCM Control Delay (s)	8	0	12.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	20	47	17	234	289	13
Future Volume (vph)	20	47	17	234	289	13
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	0.906				0.994	
Flt Protected	0.985			0.997		
Satd. Flow (prot)	1662	0	0	1857	1852	0
Flt Permitted	0.985			0.997		
Satd. Flow (perm)	1662	0	0	1857	1852	0
Link Speed (mph)	25			30	30	
Link Distance (ft)	263			231	224	
Travel Time (s)	7.2			5.3	5.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	51	18	254	314	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	73	0	0	272	328	0
Sign Control	Stop			Free	Free	

**Intersection Summary**

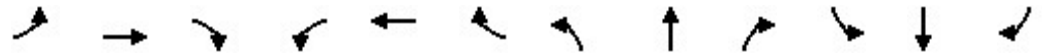
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	37.0%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	20	47	17	234	289	13
Future Vol, veh/h	20	47	17	234	289	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	51	18	254	314	14

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	611	321	328	0	-	0
Stage 1	321	-	-	-	-	-
Stage 2	290	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	457	720	1232	-	-	-
Stage 1	735	-	-	-	-	-
Stage 2	759	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	449	720	1232	-	-	-
Mov Cap-2 Maneuver	449	-	-	-	-	-
Stage 1	723	-	-	-	-	-
Stage 2	759	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.7	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1232	-	610	-	-
HCM Lane V/C Ratio	0.015	-	0.119	-	-
HCM Control Delay (s)	8	0	11.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	31	104	0	14	83	27	2	0	20	26	1	22
Future Volume (vph)	31	104	0	14	83	27	2	0	20	26	1	22
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	1.00	1.00	1.00	1.00	1.00
Frt					0.971			0.876			0.939	
Flt Protected		0.989			0.994			0.996			0.974	
Satd. Flow (prot)	0	1842	0	0	1798	0	0	1625	0	0	1704	0
Flt Permitted		0.989			0.994			0.996			0.974	
Satd. Flow (perm)	0	1842	0	0	1798	0	0	1625	0	0	1704	0
Link Speed (mph)		25			25			25			20	
Link Distance (ft)		300			231			234			261	
Travel Time (s)		8.2			6.3			6.4			8.9	
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)	34	113	0	15	90	29	2	0	22	28	1	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	147	0	0	134	0	0	24	0	0	53	0
Sign Control		Stop			Stop			Stop			Stop	

**Intersection Summary**

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 28.9% ICU Level of Service A

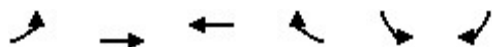
Analysis Period (min) 15

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	31	104	0	14	83	27	2	0	20	26	1	22
Future Vol, veh/h	31	104	0	14	83	27	2	0	20	26	1	22
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	2	2	2	2	2	2	2	2	2
Mvmt Flow	34	113	0	15	90	29	2	0	22	28	1	24
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.2	7.9	7.2	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	23%	11%	53%
Vol Thru, %	0%	77%	67%	2%
Vol Right, %	91%	0%	22%	45%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	22	135	124	49
LT Vol	2	31	14	26
Through Vol	0	104	83	1
RT Vol	20	0	27	22
Lane Flow Rate	24	147	135	53
Geometry Grp	1	1	1	1
Degree of Util (X)	0.027	0.172	0.152	0.065
Departure Headway (Hd)	4.084	4.216	4.071	4.413
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	881	841	868	816
Service Time	2.086	2.292	2.155	2.414
HCM Lane V/C Ratio	0.027	0.175	0.156	0.065
HCM Control Delay	7.2	8.2	7.9	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.6	0.5	0.2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	90	208	12	519	502	38
Future Volume (vph)	90	208	12	519	502	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200			100	200	0
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	1863	1863	1583	1770	1583
Flt Permitted	0.544				0.950	
Satd. Flow (perm)	1013	1863	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				564		41
Link Speed (mph)		30	30		30	
Link Distance (ft)		755	691		1010	
Travel Time (s)		17.2	15.7		23.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	98	226	13	564	546	41
Shared Lane Traffic (%)						
Lane Group Flow (vph)	98	226	13	564	546	41
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
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	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases	6			2		4
Detector Phase	1	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	9.0	31.0	31.0	21.0	21.0
Total Split (s)	12.0	44.0	32.0	32.0	21.0	21.0
Total Split (%)	18.5%	67.7%	49.2%	49.2%	32.3%	32.3%
Maximum Green (s)	8.0	40.0	28.0	28.0	17.0	17.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0

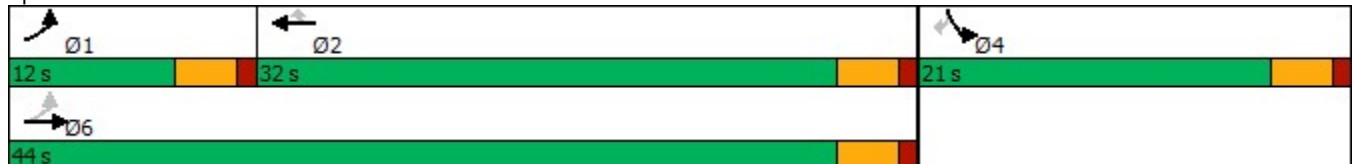


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag		Lag	
Lead-Lag Optimize?	Yes		Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	Min	Min
Walk Time (s)			7.0	7.0	7.0	7.0
Flash Dont Walk (s)			20.0	20.0	10.0	10.0
Pedestrian Calls (#/hr)			3	3	3	3
Act Effct Green (s)	21.5	21.5	10.5	10.5	17.5	17.5
Actuated g/C Ratio	0.45	0.45	0.22	0.22	0.37	0.37
v/c Ratio	0.17	0.27	0.03	0.71	0.83	0.07
Control Delay	7.3	8.1	12.8	7.2	31.6	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.3	8.1	12.8	7.2	31.6	6.5
LOS	A	A	B	A	C	A
Approach Delay		7.9	7.3		29.8	
Approach LOS		A	A		C	
Queue Length 50th (ft)	14	34	3	0	108	0
Queue Length 95th (ft)	30	61	11	51	#430	20
Internal Link Dist (ft)		675	611		930	
Turn Bay Length (ft)	200			100	200	
Base Capacity (vph)	593	1623	1136	1185	655	612
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	0.17	0.14	0.01	0.48	0.83	0.07

Intersection Summary

Area Type: Other  
 Cycle Length: 65  
 Actuated Cycle Length: 47.3  
 Natural Cycle: 65  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.83  
 Intersection Signal Delay: 16.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 46.1%  
 ICU Level of Service A  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 30: New Britain Ave & Monteith Dr



Farmington Connectivity Study  
 1: Canton Rd (RT 179) & Spielman Hwy (RT 4)

2050 Scenario 2 (Build) Conditions

PM Peak



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	282	439	578	503	327	362
Future Volume (vph)	282	439	578	503	327	362
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260	0	0			0
Storage Lanes	1	1	0			0
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	0.99	
Frt		0.850			0.929	
Flt Protected	0.950			0.974		
Satd. Flow (prot)	1787	1599	0	1832	1728	0
Flt Permitted	0.950			0.298		
Satd. Flow (perm)	1787	1599	0	561	1728	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		432			87	
Link Speed (mph)	35			50	50	
Link Distance (ft)	986			565	665	
Travel Time (s)	19.2			7.7	9.1	
Confl. Peds. (#/hr)			1			1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	288	448	590	513	334	369
Shared Lane Traffic (%)						
Lane Group Flow (vph)	288	448	0	1103	703	0
Number of Detectors	1	1	1	1	1	
Detector Template			Left			
Leading Detector (ft)	40	40	20	40	40	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	40	40	20	40	40	
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	pm+ov	D.P+P	NA	NA	
Protected Phases	4	1	1	12	2	
Permitted Phases		4	2			
Detector Phase	4	1	1	2	2	
Switch Phase						
Minimum Initial (s)	6.0	6.0	6.0		20.0	
Minimum Split (s)	17.0	10.0	10.0		26.6	
Total Split (s)	29.0	10.0	10.0		46.6	
Total Split (%)	33.9%	11.7%	11.7%		54.4%	
Maximum Green (s)	25.0	6.0	6.0		40.0	
Yellow Time (s)	3.0	3.0	3.0		5.0	
All-Red Time (s)	1.0	1.0	1.0		1.6	
Lost Time Adjust (s)	0.0	0.0			0.0	



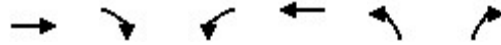
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Total Lost Time (s)	4.0	4.0			6.6	
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	1.0	3.0	3.0		5.0	
Recall Mode	None	Min	Min		Min	
Walk Time (s)	12.0					
Flash Dont Walk (s)	1.0					
Pedestrian Calls (#/hr)	1					
Act Effct Green (s)	15.7	25.7		48.8	40.2	
Actuated g/C Ratio	0.21	0.34		0.64	0.53	
v/c Ratio	0.79	0.54		2.41	0.74	
Control Delay	44.5	5.0		657.7	19.5	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	44.5	5.0		657.7	19.5	
LOS	D	A		F	B	
Approach Delay	20.5			657.7	19.5	
Approach LOS	C			F	B	
Queue Length 50th (ft)	130	5		~877	212	
Queue Length 95th (ft)	211	61		#1231	#481	
Internal Link Dist (ft)	906			485	585	
Turn Bay Length (ft)	260					
Base Capacity (vph)	586	824		457	948	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.49	0.54		2.41	0.74	

Intersection Summary

Area Type: Other  
 Cycle Length: 85.6  
 Actuated Cycle Length: 76.5  
 Natural Cycle: 150  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 2.41  
 Intersection Signal Delay: 296.7  
 Intersection LOS: F  
 Intersection Capacity Utilization 125.7%  
 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.

Splits and Phases: 1: Canton Rd (RT 179) & Spielman Hwy (RT 4)





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	497	126	106	620	171	97
Future Volume (vph)	497	126	106	620	171	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	60
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.973					0.850
Flt Protected				0.993	0.950	
Satd. Flow (prot)	1830	0	0	1868	1787	1599
Flt Permitted				0.993	0.950	
Satd. Flow (perm)	1830	0	0	1868	1787	1599
Link Speed (mph)	30			30	25	
Link Distance (ft)	740			816	860	
Travel Time (s)	16.8			18.5	23.5	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	507	129	108	633	174	99
Shared Lane Traffic (%)						
Lane Group Flow (vph)	636	0	0	741	174	99
Sign Control	Free			Free	Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	91.8%
Analysis Period (min)	15
	ICU Level of Service F

Intersection						
Int Delay, s/veh	31.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	497	126	106	620	171	97
Future Vol, veh/h	497	126	106	620	171	97
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	60
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	507	129	108	633	174	99

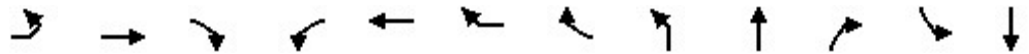
Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	636	0	1421
Stage 1	-	-	-	-	572
Stage 2	-	-	-	-	849
Critical Hdwy	-	-	4.11	-	6.41
Critical Hdwy Stg 1	-	-	-	-	5.41
Critical Hdwy Stg 2	-	-	-	-	5.41
Follow-up Hdwy	-	-	2.209	-	3.509
Pot Cap-1 Maneuver	-	-	952	-	~ 151
Stage 1	-	-	-	-	567
Stage 2	-	-	-	-	421
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	952	-	~ 125
Mov Cap-2 Maneuver	-	-	-	-	~ 125
Stage 1	-	-	-	-	567
Stage 2	-	-	-	-	347

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	186.2
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	125	522	-	-	952	-
HCM Lane V/C Ratio	1.396	0.19	-	-	0.114	-
HCM Control Delay (s)	284.2	13.5	-	-	9.3	0
HCM Lane LOS	F	B	-	-	A	A
HCM 95th %tile Q(veh)	11.8	0.7	-	-	0.4	-

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

3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)

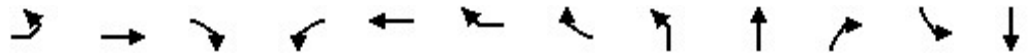


Lane Group	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↑↑			↑	↑		↑	↑	↑	↑	↑
Traffic Volume (vph)	6	119	23	227	41	479	74	180	232	297	128	317
Future Volume (vph)	6	119	23	227	41	479	74	180	232	297	128	317
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)			50	0		0		0		145	110	
Storage Lanes			1	0		1		1		1	1	
Taper Length (ft)				25				25			50	
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95
Ped Bike Factor		1.00			1.00					0.99	1.00	
Frt		0.977				0.850				0.850		0.998
Flt Protected		0.998			0.959			0.950			0.950	
Satd. Flow (prot)	0	3444	0	0	1786	1583	0	1770	1863	1583	1770	1766
Flt Permitted		0.942			0.654			0.247			0.613	
Satd. Flow (perm)	0	3251	0	0	1217	1583	0	460	1863	1563	1138	1766
Right Turn on Red			No				No			Yes		
Satd. Flow (RTOR)										253		
Link Speed (mph)		25			30			25				35
Link Distance (ft)		761			292			461				785
Travel Time (s)		20.8			6.6			12.6				15.3
Confl. Peds. (#/hr)			1	1						2	2	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	6	120	23	229	41	484	75	182	234	300	129	320
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	149	0	0	270	559	0	182	234	300	129	325
Number of Detectors	1	1		1	1	1		1	0	0	1	1
Detector Template	Left			Left								
Leading Detector (ft)	20	44		20	44	44		44	0	0	44	206
Trailing Detector (ft)	0	-6		0	-6	-6		-6	0	0	-6	200
Detector 1 Position(ft)	0	-6		0	-6	-6		-6	0	0	-6	200
Detector 1 Size(ft)	20	50		20	50	50		50	6	20	50	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA		Perm	NA	pt+ov		D.P+P	NA	Free	Perm	NA
Protected Phases		4			4	4.5		1	1.2			2
Permitted Phases	4			4				2		Free	2	
Detector Phase	4	4		4	4	4		1	2		2	2
Switch Phase												
Minimum Initial (s)	9.0	9.0		9.0	9.0			5.0			15.0	15.0
Minimum Split (s)	14.0	14.0		14.0	14.0			9.0			21.0	21.0
Total Split (s)	34.0	34.0		34.0	34.0			17.0			22.0	22.0
Total Split (%)	27.4%	27.4%		27.4%	27.4%			13.7%			17.7%	17.7%
Maximum Green (s)	29.0	29.0		29.0	29.0			13.0			16.0	16.0
Yellow Time (s)	4.0	4.0		4.0	4.0			3.0			4.0	4.0
All-Red Time (s)	1.0	1.0		1.0	1.0			1.0			2.0	2.0
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)		5.0			5.0			4.0			6.0	6.0



Lane Group	SBR	SBR2	SEL2	SEL	SER	SER2	Ø3
Lane Configurations							
Traffic Volume (vph)	4	14	9	505	139	4	
Future Volume (vph)	4	14	9	505	139	4	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	60			0	255		
Storage Lanes	1			1	1		
Taper Length (ft)				25			
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	
Ped Bike Factor				1.00			
Frt		0.850			0.850		
Flt Protected				0.950			
Satd. Flow (prot)	0	1504	0	1770	1583	0	
Flt Permitted				0.987			
Satd. Flow (perm)	0	1504	0	1836	1583	0	
Right Turn on Red		Yes				No	
Satd. Flow (RTOR)		185					
Link Speed (mph)				30			
Link Distance (ft)				820			
Travel Time (s)				18.6			
Confl. Peds. (#/hr)				2	1		
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	
Adj. Flow (vph)	4	14	9	510	140	4	
Shared Lane Traffic (%)		10%					
Lane Group Flow (vph)	0	13	0	519	144	0	
Number of Detectors		0	1	1	1		
Detector Template			Left				
Leading Detector (ft)		0	20	44	44		
Trailing Detector (ft)		0	0	-6	-6		
Detector 1 Position(ft)		0	0	-6	-6		
Detector 1 Size(ft)		20	20	50	50		
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)		0.0	0.0	0.0	0.0		
Detector 1 Queue (s)		0.0	0.0	0.0	0.0		
Detector 1 Delay (s)		0.0	0.0	0.0	0.0		
Turn Type		Free	D,Pm	Prot	Prot		
Protected Phases				5	5	3	
Permitted Phases		Free	5				
Detector Phase			5	5	5		
Switch Phase							
Minimum Initial (s)			9.0	9.0	9.0	1.0	
Minimum Split (s)			14.0	14.0	14.0	23.0	
Total Split (s)			28.0	28.0	28.0	23.0	
Total Split (%)			22.6%	22.6%	22.6%	19%	
Maximum Green (s)			23.0	23.0	23.0	19.0	
Yellow Time (s)			4.0	4.0	4.0	4.0	
All-Red Time (s)			1.0	1.0	1.0	0.0	
Lost Time Adjust (s)				0.0	0.0		
Total Lost Time (s)				5.0	5.0		

3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)

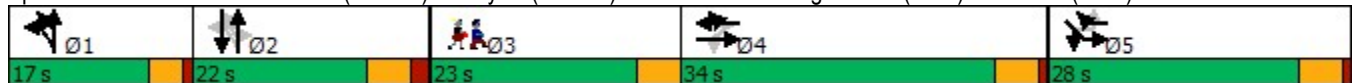


Lane Group	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lead/Lag	Lag	Lag		Lag	Lag			Lead			Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes			Yes			Yes	Yes
Vehicle Extension (s)	1.5	1.5		1.5	1.5			1.5			2.5	2.5
Recall Mode	None	None		None	None			None			Min	Min
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		27.4			27.4	55.8		29.5	33.5	102.2	16.2	16.2
Actuated g/C Ratio		0.27			0.27	0.55		0.29	0.33	1.00	0.16	0.16
v/c Ratio		0.17			0.83	0.65		0.66	0.38	0.19	0.72	1.16
Control Delay		31.0			58.4	22.7		40.7	30.5	0.3	66.4	145.8
Queue Delay		0.0			0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		31.0			58.4	22.7		40.7	30.5	0.3	66.4	145.8
LOS		C			E	C		D	C	A	E	F
Approach Delay		31.0			34.3			20.4				119.8
Approach LOS		C			C			C				F
Queue Length 50th (ft)		37			157	223		84	111	0	79	~258
Queue Length 95th (ft)		81			#386	521		#186	234	0	#223	#567
Internal Link Dist (ft)		681			212				381			705
Turn Bay Length (ft)										145	110	
Base Capacity (vph)		933			349	850		308	610	1563	180	279
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		0.16			0.77	0.66		0.59	0.38	0.19	0.72	1.16

Intersection Summary

Area Type: Other  
 Cycle Length: 124  
 Actuated Cycle Length: 102.2  
 Natural Cycle: 145  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.24  
 Intersection Signal Delay: 68.8  
 Intersection LOS: E  
 Intersection Capacity Utilization 98.7%  
 ICU Level of Service F  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)

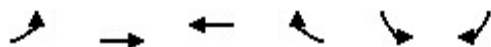




Lane Group	SBR	SBR2	SEL2	SEL	SER	SER2	Ø3
Lead/Lag							Lead
Lead-Lag Optimize?							Yes
Vehicle Extension (s)			1.5	1.5	1.5		3.0
Recall Mode			None	None	None		None
Walk Time (s)							7.0
Flash Dont Walk (s)							12.0
Pedestrian Calls (#/hr)							3
Act Effct Green (s)	102.2		23.3	23.3			
Actuated g/C Ratio	1.00		0.23	0.23			
v/c Ratio	0.01		1.24	0.40			
Control Delay	0.0		163.5	40.4			
Queue Delay	0.0		0.0	0.0			
Total Delay	0.0		163.5	40.4			
LOS		A		F		D	
Approach Delay			136.8				
Approach LOS			F				
Queue Length 50th (ft)		0	~411	78			
Queue Length 95th (ft)		0	#798	173			
Internal Link Dist (ft)			740				
Turn Bay Length (ft)		60		255			
Base Capacity (vph)		1504		418		360	
Starvation Cap Reductn		0		0		0	
Spillback Cap Reductn		0		0		0	
Storage Cap Reductn		0		0		0	
Reduced v/c Ratio		0.01		1.24		0.40	
<b>Intersection Summary</b>							

Farmington Connectivity Study  
 4: Farmington Ave (RT 4) & W Avon Rd (RT 167)

2050 Scenario 2 (Build) Conditions  
 PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3
Lane Configurations							
Traffic Volume (vph)	175	622	502	151	141	236	
Future Volume (vph)	175	622	502	151	141	236	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	365			0	0	0	
Storage Lanes	1			0	1	0	
Taper Length (ft)	50				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt			0.969		0.915		
Flt Protected	0.950				0.982		
Satd. Flow (prot)	1787	1881	1823	0	1690	0	
Flt Permitted	0.195				0.982		
Satd. Flow (perm)	367	1881	1823	0	1690	0	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			15		54		
Link Speed (mph)		30	35		30		
Link Distance (ft)		1079	965		1192		
Travel Time (s)		24.5	18.8		27.1		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	
Adj. Flow (vph)	179	635	512	154	144	241	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	179	635	666	0	385	0	
Number of Detectors	1	2	2		1		
Detector Template							
Leading Detector (ft)	24	246	246		24		
Trailing Detector (ft)	-6	120	120		-6		
Detector 1 Position(ft)	-6	120	120		-6		
Detector 1 Size(ft)	30	6	6		30		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		
Detector 2 Position(ft)		240	240				
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.P+P	NA	NA		Prot		
Protected Phases	1	1 2	2		4	3	
Permitted Phases	2						
Detector Phase	1	2	2		4		
Switch Phase							
Minimum Initial (s)	5.0		15.0		7.0	1.0	
Minimum Split (s)	9.5		22.5		22.5	23.0	
Total Split (s)	19.0		65.5		27.0	23.0	
Total Split (%)	14.1%		48.7%		20.1%	17%	
Maximum Green (s)	15.0		60.0		23.0	19.0	

Farmington Connectivity Study  
 4: Farmington Ave (RT 4) & W Avon Rd (RT 167)

2050 Scenario 2 (Build) Conditions  
 PM Peak

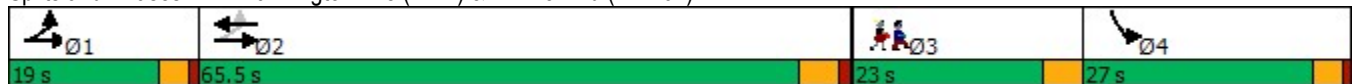


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3
Yellow Time (s)	3.0		4.0		3.0		4.0
All-Red Time (s)	1.0		1.5		1.0		0.0
Lost Time Adjust (s)	0.0		0.0		0.0		
Total Lost Time (s)	4.0		5.5		4.0		
Lead/Lag	Lead		Lag		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	1.5		2.5		2.0		3.0
Recall Mode	None		Min		None		None
Walk Time (s)							7.0
Flash Dont Walk (s)							11.0
Pedestrian Calls (#/hr)							0
Act Effct Green (s)	48.8	52.9	39.5		23.6		
Actuated g/C Ratio	0.58	0.62	0.47		0.28		
v/c Ratio	0.53	0.54	0.78		0.75		
Control Delay	12.0	10.3	24.8		38.1		
Queue Delay	0.0	0.0	0.0		0.0		
Total Delay	12.0	10.3	24.8		38.1		
LOS	B	B	C		D		
Approach Delay		10.7	24.8		38.1		
Approach LOS		B	C		D		
Queue Length 50th (ft)	34	166	271		160		
Queue Length 95th (ft)	57	236	415		#417		
Internal Link Dist (ft)		999	885		1112		
Turn Bay Length (ft)	365						
Base Capacity (vph)	487	1633	1329		510		
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	0.37	0.39	0.50		0.75		

Intersection Summary

Area Type: Other  
 Cycle Length: 134.5  
 Actuated Cycle Length: 84.8  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.78  
 Intersection Signal Delay: 21.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 78.9%  
 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.

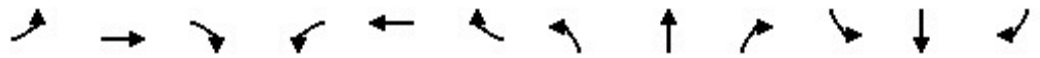
Splits and Phases: 4: Farmington Ave (RT 4) & W Avon Rd (RT 167)



Farmington Connectivity Study  
5: Farmington Ave (RT 4) & Monteith Dr

2050 Scenario 2 (Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	584	151	243	562	55	201	58	254	56	81	34
Future Volume (vph)	56	584	151	243	562	55	201	58	254	56	81	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	250		100	250		0	0		0
Storage Lanes	1		0	1		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
Frt		0.970				0.850		0.878			0.954	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1836	0	1770	1900	1615	1770	1635	0	1805	1788	0
Flt Permitted	0.319			0.076			0.559			0.225		
Satd. Flow (perm)	606	1836	0	142	1900	1615	1041	1635	0	428	1788	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				55		190			19	
Link Speed (mph)		35			35			30			25	
Link Distance (ft)		784			925			1010			548	
Travel Time (s)		15.3			18.0			23.0			14.9	
Peak Hour Factor	0.88	0.88	0.92	0.92	0.88	0.88	0.92	0.92	0.92	0.88	0.92	0.88
Heavy Vehicles (%)	0%	0%	2%	2%	0%	0%	2%	2%	2%	0%	2%	0%
Adj. Flow (vph)	64	664	164	264	639	63	218	63	276	64	88	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	64	828	0	264	639	63	218	339	0	64	127	0
Number of Detectors	1	0		1	1	1	1	2		3	2	
Detector Template	Left			Left		Right	Left	Thru			Thru	
Leading Detector (ft)	20	0		20	356	20	20	100		24	100	
Trailing Detector (ft)	0	0		0	350	0	0	0		-6	0	
Detector 1 Position(ft)	0	0		0	350	0	0	0		-6	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		6	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)								94		6	94	
Detector 2 Size(ft)								6		6	6	
Detector 2 Type								Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0		0.0	0.0	
Detector 3 Position(ft)										18		
Detector 3 Size(ft)										6		
Detector 3 Type										Cl+Ex		
Detector 3 Channel												
Detector 3 Extend (s)										0.0		
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2	7	3	8		7	4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	7	3	8		7	4	
Switch Phase												

Farmington Connectivity Study  
5: Farmington Ave (RT 4) & Monteith Dr

2050 Scenario 2 (Build) Conditions  
PM Peak

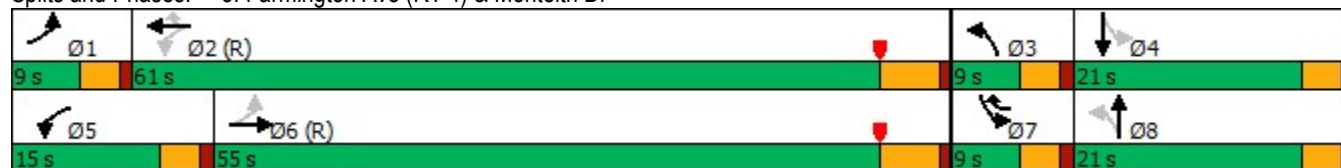


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.0	32.4		9.0	32.4	9.0	9.0	21.0		9.0	21.0	
Total Split (s)	9.0	55.0		15.0	61.0	9.0	9.0	21.0		9.0	21.0	
Total Split (%)	9.0%	55.0%		15.0%	61.0%	9.0%	9.0%	21.0%		9.0%	21.0%	
Maximum Green (s)	5.0	49.6		11.0	55.6	5.0	5.0	17.0		5.0	17.0	
Yellow Time (s)	3.0	4.4		3.0	4.4	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	5.4		4.0	5.4	4.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	1.5	3.0	3.0		1.5	3.0	
Recall Mode	None	C-Max		None	C-Max	None	None	Max		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		20.0			20.0			10.0			10.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	56.0	49.6		66.0	57.4	67.8	22.8	18.8		22.0	17.0	
Actuated g/C Ratio	0.56	0.50		0.66	0.57	0.68	0.23	0.19		0.22	0.17	
v/c Ratio	0.16	0.90		0.97	0.59	0.06	0.80	0.74		0.39	0.40	
Control Delay	7.5	37.3		73.8	17.0	2.2	57.1	28.0		36.1	35.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	7.5	37.3		73.8	17.0	2.2	57.1	28.0		36.1	35.5	
LOS	A	D		E	B	A	E	C		D	D	
Approach Delay		35.1			31.6			39.4			35.7	
Approach LOS		D			C			D			D	
Queue Length 50th (ft)	13	454		115	257	2	117	91		31	62	
Queue Length 95th (ft)	26	#688		#276	354	14	#239	#226		64	118	
Internal Link Dist (ft)		704			845			930			468	
Turn Bay Length (ft)	200			250		100	250					
Base Capacity (vph)	399	919		272	1090	1112	273	461		163	319	
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	0.16	0.90		0.97	0.59	0.06	0.80	0.74		0.39	0.40	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	10 (10%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.97
Intersection Signal Delay:	34.8
Intersection LOS:	C
Intersection Capacity Utilization:	90.7%
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: 5: Farmington Ave (RT 4) & Monteith Dr



Farmington Connectivity Study  
6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)

2050 Scenario 2 (Build) Conditions

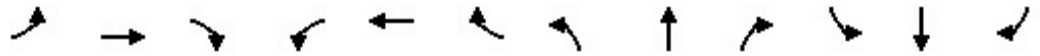
PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	746	51	60	715	273	76	46	70	301	33	110
Future Volume (vph)	106	746	51	60	715	273	76	46	70	301	33	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90		0	90		90	0		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	65			110			25			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00				0.98		1.00		
Frt		0.990				0.850		0.909				0.885
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1842	0	1770	1863	1583	1770	1666	0	1770	1649	0
Flt Permitted	0.075			0.078			0.465			0.592		
Satd. Flow (perm)	140	1842	0	145	1863	1583	866	1666	0	1101	1649	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				175		50			107	
Link Speed (mph)		40			40			30			35	
Link Distance (ft)		635			779			428			768	
Travel Time (s)		10.8			13.3			9.7			15.0	
Confl. Peds. (#/hr)			1	1					1	1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	785	54	63	753	287	80	48	74	317	35	116
Shared Lane Traffic (%)												
Lane Group Flow (vph)	112	839	0	63	753	287	80	122	0	317	151	0
Number of Detectors	1	2		1	2	0	1	1		1	1	
Detector Template												
Leading Detector (ft)	45	342		45	342	0	55	50		50	60	
Trailing Detector (ft)	-5	190		-5	190	0	-5	-10		-10	-10	
Detector 1 Position(ft)	-5	190		-5	190	0	-5	-10		-10	-10	
Detector 1 Size(ft)	50	6		50	6	20	60	60		60	70	
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)		336			336							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	8		7	8	
Permitted Phases	6			2		2	8			8		
Detector Phase	1	6		5	2	2	7	8		7	8	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	5.0	7.0		5.0	7.0	
Minimum Split (s)	10.4	22.0		10.4	22.0	22.0	10.9	14.0		10.9	14.0	
Total Split (s)	15.0	46.0		15.0	46.0	46.0	29.0	16.0		29.0	16.0	
Total Split (%)	12.5%	38.3%		12.5%	38.3%	38.3%	24.2%	13.3%		24.2%	13.3%	

Lane Group	Ø9
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	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
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	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	5.0
Total Split (s)	14.0
Total Split (%)	12%

Farmington Connectivity Study  
 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)

2050 Scenario 2 (Build) Conditions  
 PM Peak

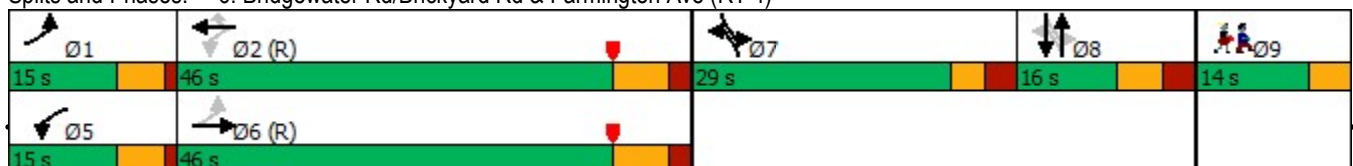


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	9.6	39.0		9.6	39.0	39.0	23.1	9.0		23.1	9.0	
Yellow Time (s)	4.4	5.0		4.4	5.0	5.0	3.0	4.1		3.0	4.1	
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	2.9	2.9		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	7.0		5.4	7.0	7.0	5.9	7.0		5.9	7.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effect Green (s)	66.3	57.9		62.8	54.6	54.6	30.5	8.6		30.5	8.6	
Actuated g/C Ratio	0.55	0.48		0.52	0.46	0.46	0.25	0.07		0.25	0.07	
v/c Ratio	0.61	0.94		0.38	0.89	0.35	0.21	0.74		0.80	0.70	
Control Delay	32.6	51.0		20.6	45.6	11.0	31.1	58.4		51.4	36.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	32.6	51.0		20.6	45.6	11.0	31.1	58.4		51.4	36.0	
LOS	C	D		C	D	B	C	E		D	D	
Approach Delay		48.9			35.2			47.6			46.5	
Approach LOS		D			D			D			D	
Queue Length 50th (ft)	37	616		20	522	50	44	55		201	33	
Queue Length 95th (ft)	106	#1115		53	#963	144	82	#147		295	#119	
Internal Link Dist (ft)		555			699			348			688	
Turn Bay Length (ft)	90			90		90				150		
Base Capacity (vph)	208	890		209	847	815	408	173		426	224	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.54	0.94		0.30	0.89	0.35	0.20	0.71		0.74	0.67	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 16 (13%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.94  
 Intersection Signal Delay: 42.8 Intersection LOS: D  
 Intersection Capacity Utilization 91.1% 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.

Splits and Phases: 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)

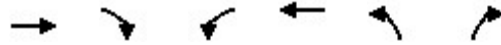


Lane Group	Ø9
Maximum Green (s)	10.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	16.0
Pedestrian Calls (#/hr)	2
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	

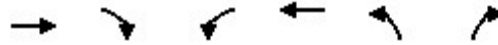
Farmington Connectivity Study  
 7: Garden St & Farmington Ave (RT 4)

2050 Scenario 2 (Build) Conditions

PM Peak



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø4
Lane Configurations	↑↑		↙	↑	↘			
Traffic Volume (vph)	1230	119	14	866	121	16		
Future Volume (vph)	1230	119	14	866	121	16		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)		0	200		0	0		
Storage Lanes		0	1		1	0		
Taper Length (ft)			50		25			
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00		
Ped Bike Factor	1.00		1.00		0.98			
Frt	0.987				0.984			
Flt Protected			0.950		0.958			
Satd. Flow (prot)	3520	0	1787	1881	1773	0		
Flt Permitted			0.146		0.958			
Satd. Flow (perm)	3520	0	274	1881	1745	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)	11				4			
Link Speed (mph)	30			30	25			
Link Distance (ft)	1042			566	488			
Travel Time (s)	23.7			12.9	13.3			
Confl. Peds. (#/hr)		6	6		5			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%		
Adj. Flow (vph)	1309	127	15	921	129	17		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	1436	0	15	921	146	0		
Number of Detectors	0		0	0	3			
Detector Template								
Leading Detector (ft)	0		0	0	24			
Trailing Detector (ft)	0		0	0	-6			
Detector 1 Position(ft)	0		0	0	-6			
Detector 1 Size(ft)	6		20	6	6			
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel								
Detector 1 Extend (s)	0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0		0.0	0.0	0.0			
Detector 2 Position(ft)					6			
Detector 2 Size(ft)					6			
Detector 2 Type					Cl+Ex			
Detector 2 Channel								
Detector 2 Extend (s)					0.0			
Detector 3 Position(ft)					18			
Detector 3 Size(ft)					6			
Detector 3 Type					Cl+Ex			
Detector 3 Channel								
Detector 3 Extend (s)					0.0			
Turn Type	NA		Perm	NA	Prot			
Protected Phases	2 4			2	5		3	4
Permitted Phases			2					

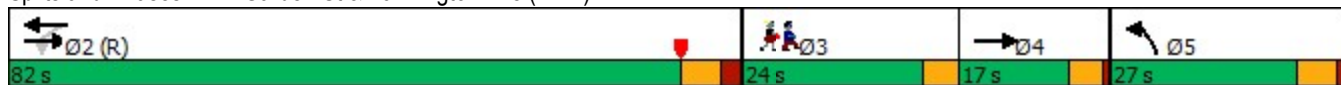


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø4
Detector Phase	2		2	2	5			
Switch Phase								
Minimum Initial (s)			15.0	15.0	7.0		7.0	6.0
Minimum Split (s)			22.1	22.1	13.3		24.0	10.8
Total Split (s)			82.0	82.0	27.0		24.0	17.0
Total Split (%)			54.7%	54.7%	18.0%		16%	11%
Maximum Green (s)			74.9	74.9	20.7		20.0	12.2
Yellow Time (s)			4.6	4.6	4.5		4.0	3.8
All-Red Time (s)			2.5	2.5	1.8		0.0	1.0
Lost Time Adjust (s)			0.0	0.0	0.0			
Total Lost Time (s)			7.1	7.1	6.3			
Lead/Lag							Lead	Lag
Lead-Lag Optimize?							Yes	Yes
Vehicle Extension (s)			3.0	3.0	1.5		3.0	1.5
Recall Mode			C-Max	C-Max	None		None	None
Walk Time (s)							7.0	
Flash Dont Walk (s)							13.0	
Pedestrian Calls (#/hr)							11	
Act Effct Green (s)	111.0		111.0	111.0	16.0			
Actuated g/C Ratio	0.74		0.74	0.74	0.11			
v/c Ratio	0.55		0.07	0.66	0.76			
Control Delay	12.1		2.4	7.2	86.8			
Queue Delay	0.1		0.0	0.6	0.0			
Total Delay	12.2		2.4	7.7	86.8			
LOS	B		A	A	F			
Approach Delay	12.2			7.7	86.8			
Approach LOS	B			A	F			
Queue Length 50th (ft)	205		1	38	137			
Queue Length 95th (ft)	550		m1	m95	207			
Internal Link Dist (ft)	962			486	408			
Turn Bay Length (ft)			200					
Base Capacity (vph)	2608		202	1392	252			
Starvation Cap Reductn	0		0	171	0			
Spillback Cap Reductn	271		0	0	0			
Storage Cap Reductn	0		0	0	0			
Reduced v/c Ratio	0.61		0.07	0.75	0.58			

**Intersection Summary**

Area Type: Other  
 Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 30 (20%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.76  
 Intersection Signal Delay: 14.8  
 Intersection Capacity Utilization 64.4%  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

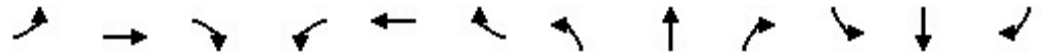
Splits and Phases: 7: Garden St & Farmington Ave (RT 4)



Farmington Connectivity Study  
 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4)

2050 Scenario 2 (Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1040	218	80	711	98	176	137	78	226	163	9
Future Volume (vph)	1	1040	218	80	711	98	176	137	78	226	163	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	255		0	100		50	0		0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (ft)	65			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor							0.99					1.00
Frt			0.850		0.982				0.850			0.997
Flt Protected	0.950			0.950			0.950					0.972
Satd. Flow (prot)	1787	3574	1599	1787	1847	0	1787	1881	1599	0	1822	0
Flt Permitted	0.085			0.077			0.950					0.972
Satd. Flow (perm)	160	3574	1599	145	1847	0	1774	1881	1599	0	1822	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30				30
Link Distance (ft)		566			848			677				693
Travel Time (s)		12.9			19.3			15.4				15.8
Confl. Peds. (#/hr)							2					2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	1	1061	222	82	726	100	180	140	80	231	166	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	1061	222	82	826	0	180	140	80	0	406	0
Number of Detectors	3	3	4	1	1		3	3	2	1	2	
Detector Template										Left		
Leading Detector (ft)	30	30	36	34	34		30	30	48	20	48	
Trailing Detector (ft)	0	0	-6	0	0		0	0	0	0	-6	
Detector 1 Position(ft)	0	0	-6	0	0		0	0	0	0	-6	
Detector 1 Size(ft)	6	6	6	34	34		6	6	12	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	12	12	6				12	12	18		6	
Detector 2 Size(ft)	6	6	6				6	6	30		42	
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0	0.0				0.0	0.0	0.0		0.0	
Detector 3 Position(ft)	24	24	18				24	24				
Detector 3 Size(ft)	6	6	6				6	6				
Detector 3 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex				
Detector 3 Channel												
Detector 3 Extend (s)	0.0	0.0	0.0				0.0	0.0				
Detector 4 Position(ft)			30									
Detector 4 Size(ft)			6									
Detector 4 Type			Cl+Ex									

Lane Group	Ø3
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)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Detector 4 Position(ft)	
Detector 4 Size(ft)	
Detector 4 Type	

Farmington Connectivity Study  
 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4)

2050 Scenario 2 (Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 4 Channel												
Detector 4 Extend (s)	0.0											
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Split	NA	pt+ov	Split	NA	
Protected Phases	1	6		5	2		7	7	5 7	4	4	
Permitted Phases	6		6	2								
Detector Phase	1	6	6	5	2		7	7	7	4	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	7.0	20.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	9.5	27.3	27.3	12.0	27.3		13.0	13.0		22.5	22.5	
Total Split (s)	15.0	54.0	54.0	15.0	54.0		23.0	23.0		34.0	34.0	
Total Split (%)	10.0%	36.0%	36.0%	10.0%	36.0%		15.3%	15.3%		22.7%	22.7%	
Maximum Green (s)	11.0	46.7	46.7	10.0	46.7		17.0	17.0		28.3	28.3	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	2.8	2.8	2.0	2.8		3.0	3.0		2.7	2.7	
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	7.3	7.3	5.0	7.3		6.0	6.0				5.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag					Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None		None	None	
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										5.0	5.0	
Pedestrian Calls (#/hr)										2	2	
Act Effct Green (s)	58.7	50.4	50.4	65.9	61.8		19.3	19.3	33.5			43.3
Actuated g/C Ratio	0.39	0.34	0.34	0.44	0.41		0.13	0.13	0.22			0.29
v/c Ratio	0.01	0.88	0.41	0.54	1.09		0.79	0.58	0.22			0.77
Control Delay	13.0	45.4	29.5	44.0	98.9		85.5	71.5	48.7			60.1
Queue Delay	0.0	3.3	0.0	0.0	0.0		1.5	0.0	0.0			0.0
Total Delay	13.0	48.7	29.5	44.0	98.9		87.0	71.5	48.7			60.1
LOS	B	D	C	D	F		F	E	D			E
Approach Delay		45.3			93.9			73.9				60.1
Approach LOS		D			F			E				E
Queue Length 50th (ft)	0	510	166	49	~872		170	128	63			361
Queue Length 95th (ft)	m0	#679	198	m96	#1267		#320	211	116			#688
Internal Link Dist (ft)		486			768			597				613
Turn Bay Length (ft)	100		150	255			100		50			
Base Capacity (vph)	188	1200	537	173	761		235	248	351			525
Starvation Cap Reductn	0	77	0	0	0		0	0	0			0
Spillback Cap Reductn	0	0	0	0	0		9	0	0			0
Storage Cap Reductn	0	0	0	0	0		0	0	0			0
Reduced v/c Ratio	0.01	0.94	0.41	0.47	1.09		0.80	0.56	0.23			0.77

Intersection Summary

Area Type: Other  
 Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 20 (13%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated

Lane Group	Ø3
Detector 4 Channel	
Detector 4 Extend (s)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	25.0
Total Split (s)	24.0
Total Split (%)	16%
Maximum Green (s)	20.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	13.0
Pedestrian Calls (#/hr)	2
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	

Maximum v/c Ratio: 1.09

Intersection Signal Delay: 65.9

Intersection LOS: E

Intersection Capacity Utilization 98.1%

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.

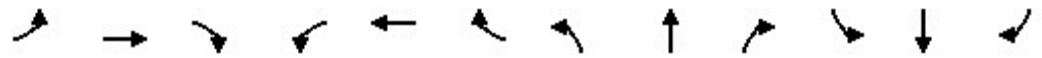
Splits and Phases: 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4)

 Ø1 15 s	 Ø2 (R) 54 s	 Ø3 24 s	 Ø4 34 s	 Ø7 23 s
 Ø5 15 s	 Ø6 (R) 54 s			

Farmington Connectivity Study  
 9: High St/Backage Rd & Farmington Ave (RT 4)

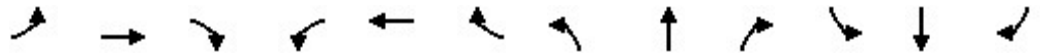
2050 Scenario 2 (Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	1312	44	47	855	5	75	1	74	6	3	3
Future Volume (vph)	7	1312	44	47	855	5	75	1	74	6	3	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	85		100	115		0	0		85	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	70			115			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			0.99	
Frt		0.995			0.999				0.850		0.966	
Flt Protected	0.950			0.950				0.953			0.976	
Satd. Flow (prot)	1770	3522	0	1770	1861	0	0	1775	1583	0	1745	0
Flt Permitted	0.233			0.139								
Satd. Flow (perm)	434	3522	0	259	1861	0	0	1856	1583	0	1784	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		3							85			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		848			473			291			375	
Travel Time (s)		19.3			10.8			6.6			8.5	
Confl. Peds. (#/hr)							1		1	1		1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	7	1367	46	49	891	5	78	1	77	6	3	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	1413	0	49	896	0	0	79	77	0	12	0
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template							Left			Left		
Leading Detector (ft)	40	40		25	25		20	35	35	20	30	
Trailing Detector (ft)	0	0		-10	-10		0	0	0	0	0	
Detector 1 Position(ft)	0	0		-10	-10		0	0	0	0	0	
Detector 1 Size(ft)	40	40		35	35		20	35	35	20	30	
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	pm+pt	NA		pm+pt	NA		D.P+P	NA	Prot	Perm	NA	
Protected Phases	1	6		5	2		4	4 7	4 7		7	
Permitted Phases	6			2			7			7		
Detector Phase	1	6		5	2		4	4	4	7	7	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		7.0			7.0	7.0	
Minimum Split (s)	9.0	21.7		9.0	21.7		11.7			12.0	12.0	
Total Split (s)	13.0	83.0		13.0	83.0		14.0			16.0	16.0	
Total Split (%)	8.7%	55.3%		8.7%	55.3%		9.3%			10.7%	10.7%	
Maximum Green (s)	9.0	76.3		9.0	76.3		9.3			11.0	11.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0			3.0	3.0	
All-Red Time (s)	1.0	2.2		1.0	2.2		1.7			2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	
Total Lost Time (s)	4.0	6.7		4.0	6.7						5.0	

Lane Group	Ø3
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	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	24.0
Total Split (s)	24.0
Total Split (%)	16%
Maximum Green (s)	20.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	

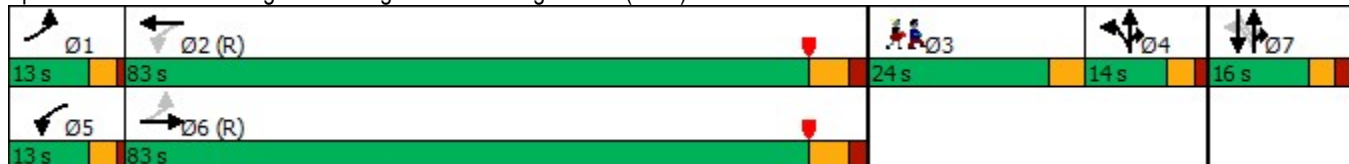


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag		Lead	Lag		Lag					
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes					
Vehicle Extension (s)	1.5	2.0		1.5	2.0		2.0			2.0	2.0	
Recall Mode	None	C-Min		None	C-Min		None			None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	118.4	111.7		121.7	117.6		14.4	14.4			7.2	
Actuated g/C Ratio	0.79	0.74		0.81	0.78		0.10	0.10			0.05	
v/c Ratio	0.02	0.54		0.18	0.61		0.44	0.34			0.14	
Control Delay	4.4	15.0		6.9	13.4		69.8	13.0			72.2	
Queue Delay	0.0	0.3		0.0	0.0		0.0	0.0			0.0	
Total Delay	4.4	15.4		6.9	13.4		69.8	13.0			72.2	
LOS	A	B		A	B		E	B			E	
Approach Delay		15.3			13.1		41.7				72.2	
Approach LOS		B			B		D				E	
Queue Length 50th (ft)	2	442		5	198		76	0			12	
Queue Length 95th (ft)	m2	195		34	954		124	42			35	
Internal Link Dist (ft)		768			393		211				295	
Turn Bay Length (ft)	85			115				85				
Base Capacity (vph)	431	2622		301	1458		184	233			130	
Starvation Cap Reductn	0	562		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	0.02	0.69		0.16	0.61		0.43	0.33			0.09	

Intersection Summary

Area Type: Other  
 Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 45 (30%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.61  
 Intersection Signal Delay: 16.4  
 Intersection LOS: B  
 Intersection Capacity Utilization 63.0%  
 ICU Level of Service B  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: High St/Backage Rd & Farmington Ave (RT 4)

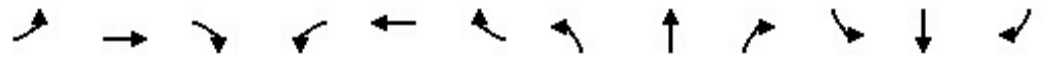


Lane Group	Ø3
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	13.0
Pedestrian Calls (#/hr)	4
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 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	

Farmington Connectivity Study  
 10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd

2050 Scenario 2 (Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	10	9	7	60	1	96	3	499	60	60	589	37
Future Volume (vph)	10	9	7	60	1	96	3	499	60	60	589	37
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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00							
Frt		0.963			0.917			0.986			0.993	
Flt Protected		0.981			0.981						0.996	
Satd. Flow (prot)	0	1766	0	0	1692	0	0	1855	0	0	1861	0
Flt Permitted		0.889			0.862			0.996			0.926	
Satd. Flow (perm)	0	1601	0	0	1486	0	0	1847	0	0	1730	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			63			6			3	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		360			802			2590			707	
Travel Time (s)		8.2			18.2			44.1			12.1	
Confl. Peds. (#/hr)			1	1								
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	11	10	8	67	1	107	3	554	67	67	654	41
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	29	0	0	175	0	0	624	0	0	762	0
Number of Detectors	1	1		1	1		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	22		20	22		20	206		20	206	
Trailing Detector (ft)	0	-10		0	-10		0	100		0	100	
Detector 1 Position(ft)	0	-10		0	-10		0	100		0	100	
Detector 1 Size(ft)	20	32		20	32		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)								200			200	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		D.P+P	NA	
Protected Phases		4			4			2		1	12	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		1	1	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0		5.0		
Minimum Split (s)	12.0	12.0		12.0	12.0		21.6	21.6		9.0		
Total Split (s)	30.0	30.0		30.0	30.0		51.6	51.6		12.0		
Total Split (%)	26.0%	26.0%		26.0%	26.0%		44.6%	44.6%		10.4%		
Maximum Green (s)	25.0	25.0		25.0	25.0		45.0	45.0		8.0		
Yellow Time (s)	3.3	3.3		3.3	3.3		4.2	4.2		3.0		

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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)	
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	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	22.0
Total Split (s)	22.0
Total Split (%)	19%
Maximum Green (s)	18.0
Yellow Time (s)	4.0

Farmington Connectivity Study  
 10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd

2050 Scenario 2 (Build) Conditions  
 PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	1.7	1.7		1.7	1.7		2.4	2.4		1.0		
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.0			5.0			6.6				
Lead/Lag	Lag	Lag		Lag	Lag		Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes		
Vehicle Extension (s)	1.5	1.5		1.5	1.5		2.5	2.5		3.0		
Recall Mode	None	None		None	None		Min	Min		None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		11.1			11.1			26.9				38.6
Actuated g/C Ratio		0.17			0.17			0.40				0.58
v/c Ratio		0.11			0.58			0.83				0.75
Control Delay		25.2			28.5			30.0				17.2
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		25.2			28.5			30.0				17.2
LOS		C			C			C				B
Approach Delay		25.2			28.5			30.0				17.2
Approach LOS		C			C			C				B
Queue Length 50th (ft)		6			36			179				116
Queue Length 95th (ft)		39			145			#581				#619
Internal Link Dist (ft)		280			722			2510				627
Turn Bay Length (ft)												
Base Capacity (vph)		664			649			1371				1020
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		0.04			0.27			0.46				0.75

Intersection Summary

Area Type: Other  
 Cycle Length: 115.6  
 Actuated Cycle Length: 66.6  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.83  
 Intersection Signal Delay: 23.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 91.6%  
 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.

Splits and Phases: 10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd



Lane Group	Ø3
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	1
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	235	44	66	309	341	364
Future Volume (vph)	235	44	66	309	341	364
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	0.979				0.930	
Flt Protected	0.960			0.991		
Satd. Flow (prot)	1786	0	0	1883	1767	0
Flt Permitted	0.960			0.991		
Satd. Flow (perm)	1786	0	0	1883	1767	0
Link Speed (mph)	40			30	40	
Link Distance (ft)	781			809	2590	
Travel Time (s)	13.3			18.4	44.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	255	48	72	336	371	396
Shared Lane Traffic (%)						
Lane Group Flow (vph)	303	0	0	408	767	0
Sign Control	Stop			Stop	Stop	

**Intersection Summary**

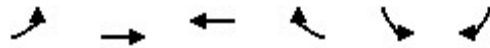
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	85.8%
ICU Level of Service	E
Analysis Period (min)	15

Intersection	
Intersection Delay, s/veh	63.9
Intersection LOS	F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	235	44	66	309	341	364
Future Vol, veh/h	235	44	66	309	341	364
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	255	48	72	336	371	396
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	18.7	21.6	104.3
HCM LOS	C	C	F

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	18%	84%	0%
Vol Thru, %	82%	0%	48%
Vol Right, %	0%	16%	52%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	375	279	705
LT Vol	66	235	0
Through Vol	309	0	341
RT Vol	0	44	364
Lane Flow Rate	408	303	766
Geometry Grp	1	1	1
Degree of Util (X)	0.681	0.563	1.148
Departure Headway (Hd)	6.278	7.014	5.393
Convergence, Y/N	Yes	Yes	Yes
Cap	579	519	674
Service Time	4.278	5.014	3.425
HCM Lane V/C Ratio	0.705	0.584	1.136
HCM Control Delay	21.6	18.7	104.3
HCM Lane LOS	C	C	F
HCM 95th-tile Q	5.2	3.4	24.1



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↔		↕	
Traffic Volume (vph)	171	88	161	93	48	193
Future Volume (vph)	171	88	161	93	48	193
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			0.951		0.892	
Flt Protected		0.968			0.990	
Satd. Flow (prot)	0	1839	1807	0	1678	0
Flt Permitted		0.968			0.990	
Satd. Flow (perm)	0	1839	1807	0	1678	0
Link Speed (mph)		30	30		25	
Link Distance (ft)		546	304		789	
Travel Time (s)		12.4	6.9		21.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	190	98	179	103	53	214
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	288	282	0	267	0
Sign Control		Free	Free		Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	52.8%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	6.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	171	88	161	93	48	193
Future Vol, veh/h	171	88	161	93	48	193
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	190	98	179	103	53	214

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	282	0	0	709	231
Stage 1	-	-	-	231	-
Stage 2	-	-	-	478	-
Critical Hdwy	4.1	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	3.5	3.3
Pot Cap-1 Maneuver	1292	-	-	404	813
Stage 1	-	-	-	812	-
Stage 2	-	-	-	628	-
Platoon blocked, %		-	-		
Mov Cap-1 Maneuver	1292	-	-	341	813
Mov Cap-2 Maneuver	-	-	-	341	-
Stage 1	-	-	-	685	-
Stage 2	-	-	-	628	-

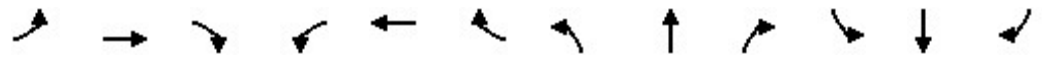
Approach	EB	WB	SB
HCM Control Delay, s	5.5	0	14.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1292	-	-	-	637
HCM Lane V/C Ratio	0.147	-	-	-	0.42
HCM Control Delay (s)	8.3	0	-	-	14.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.5	-	-	-	2.1

Farmington Connectivity Study  
13: Stafford Ave & Stevens St

2050 Scenario 2 (Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	41	186	75	88	329	36	151	290	79	23	230	44
Future Volume (vph)	41	186	75	88	329	36	151	290	79	23	230	44
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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00				1.00
Frt		0.966			0.989			0.979			0.980	
Flt Protected		0.993			0.990			0.986			0.996	
Satd. Flow (prot)	0	1823	0	0	1860	0	0	1834	0	0	1849	0
Flt Permitted		0.900			0.855			0.667			0.939	
Satd. Flow (perm)	0	1652	0	0	1607	0	0	1240	0	0	1743	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		543			653			565			383	
Travel Time (s)		12.3			14.8			12.8			8.7	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	42	190	77	90	336	37	154	296	81	23	235	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	309	0	0	463	0	0	531	0	0	303	0
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	81		20	81		20	116		20	106	
Trailing Detector (ft)	0	75		0	75		0	110		0	100	
Detector 1 Position(ft)	0	75		0	75		0	110		0	100	
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	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4				4
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	19.0	19.0		19.0	19.0		19.0	19.0		19.0	19.0	
Total Split (s)	34.0	34.0		34.0	34.0		29.0	29.0		29.0	29.0	
Total Split (%)	41.5%	41.5%		41.5%	41.5%		35.4%	35.4%		35.4%	35.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	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			4.0			4.0	
Lead/Lag							Lag	Lag		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	19.0
Total Split (s)	19.0
Total Split (%)	23%
Maximum Green (s)	17.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes

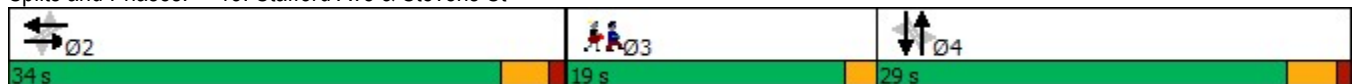


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	5.0	5.0		5.0	5.0		2.0	2.0		2.0	2.0	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		30.0			30.0			25.0				25.0
Actuated g/C Ratio		0.37			0.37			0.30				0.30
v/c Ratio		0.51			0.79			1.40				0.57
Control Delay		24.0			34.9			224.4				29.0
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		24.0			34.9			224.4				29.0
LOS		C			C			F				C
Approach Delay		24.0			34.9			224.4				29.0
Approach LOS		C			C			F				C
Queue Length 50th (ft)		121			208			~371				130
Queue Length 95th (ft)		198			#362			#558				211
Internal Link Dist (ft)		463			573			485				303
Turn Bay Length (ft)												
Base Capacity (vph)		604			587			378				531
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		0.51			0.79			1.40				0.57

Intersection Summary

Area Type:	Other
Cycle Length:	82
Actuated Cycle Length:	82
Natural Cycle:	90
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.40
Intersection Signal Delay:	94.3
Intersection LOS:	F
Intersection Capacity Utilization:	91.5%
ICU Level of Service:	F
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 13: Stafford Ave & Stevens St























Lane Group	Ø3
Vehicle Extension (s)	3.0
Recall Mode	Ped
Walk Time (s)	7.0
Flash Dont Walk (s)	10.0
Pedestrian Calls (#/hr)	1
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

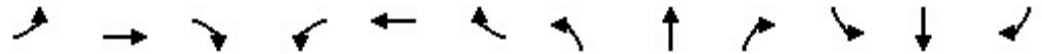
Farmington Connectivity Study  
 14: S Main St (RT 177) & Mill St

2050 Scenario 2 (Build) Conditions

PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	45	82	96	67	28	82	171	146	32	231	22
Future Volume (vph)	42	45	82	96	67	28	82	171	146	32	231	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		95	0		100	60		0	0		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
Frt			0.850			0.850		0.931			0.987	
Flt Protected		0.976			0.971		0.950			0.950		
Satd. Flow (prot)	0	1836	1599	0	1827	1599	1787	1751	0	1787	1857	0
Flt Permitted		0.733			0.763		0.560			0.535		
Satd. Flow (perm)	0	1379	1599	0	1435	1599	1053	1751	0	1006	1857	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			30			25			25	
Link Distance (ft)		906			356			584			461	
Travel Time (s)		24.7			8.1			15.9			12.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	47	50	91	107	74	31	91	190	162	36	257	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	97	91	0	181	31	91	352	0	36	281	0
Number of Detectors	1	1	1	1	1	1	1	0		0	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	50	50	20	40	40	50	0		0	0	
Trailing Detector (ft)	0	0	0	0	-10	-10	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	-10	-10	0	0		0	0	
Detector 1 Size(ft)	20	50	50	20	50	50	50	6		20	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	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	pm+ov	Perm	NA	Prot	D.P+P	NA		Perm	NA	
Protected Phases		4	2		4	4	2	1 2				1
Permitted Phases	4		4	4			1			1		
Detector Phase	4	4	2	4	4	4	2	2		1	1	
Switch Phase												
Minimum Initial (s)	6.0	6.0	5.0	6.0	6.0	6.0	5.0			25.0	25.0	
Minimum Split (s)	10.3	10.3	9.6	10.3	10.3	10.3	9.6			29.6	29.6	
Total Split (s)	21.3	21.3	15.6	21.3	21.3	21.3	15.6			49.6	49.6	
Total Split (%)	19.1%	19.1%	14.0%	19.1%	19.1%	19.1%	14.0%			44.5%	44.5%	
Maximum Green (s)	17.0	17.0	11.0	17.0	17.0	17.0	11.0			45.0	45.0	
Yellow Time (s)	3.2	3.2	3.6	3.2	3.2	3.2	3.6			3.6	3.6	
All-Red Time (s)	1.1	1.1	1.0	1.1	1.1	1.1	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)		4.3	4.6		4.3	4.3	4.6			4.6	4.6	
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag			Lead	Lead	

Lane Group	Ø3
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)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	25.0
Total Split (s)	25.0
Total Split (%)	22%
Maximum Green (s)	21.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead

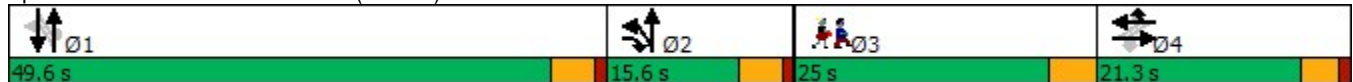


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5			3.0	3.0	
Recall Mode	None	None	None	None	None	None	None			Max	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		15.4	27.0		15.4	15.4	52.4	57.0		45.1	45.1	
Actuated g/C Ratio		0.19	0.33		0.19	0.19	0.64	0.70		0.55	0.55	
v/c Ratio		0.37	0.17		0.67	0.10	0.12	0.29		0.06	0.27	
Control Delay		33.7	19.8		44.1	28.5	4.9	5.5		9.9	11.1	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		33.7	19.8		44.1	28.5	4.9	5.5		9.9	11.1	
LOS		C	B		D	C	A	A		A	B	
Approach Delay		27.0			41.8			5.4			10.9	
Approach LOS		C			D			A			B	
Queue Length 50th (ft)		43	32		86	13	13	61		8	73	
Queue Length 95th (ft)		91	65		#170	37	27	96		24	128	
Internal Link Dist (ft)		826			276			504			381	
Turn Bay Length (ft)			95			100	60					
Base Capacity (vph)		289	506		300	335	827	1309		558	1030	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.34	0.18		0.60	0.09	0.11	0.27		0.06	0.27	

Intersection Summary

Area Type: Other  
 Cycle Length: 111.5  
 Actuated Cycle Length: 81.3  
 Natural Cycle: 80  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.67  
 Intersection Signal Delay: 17.0  
 Intersection LOS: B  
 Intersection Capacity Utilization 68.4%  
 ICU Level of Service C  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 14: S Main St (RT 177) & Mill St

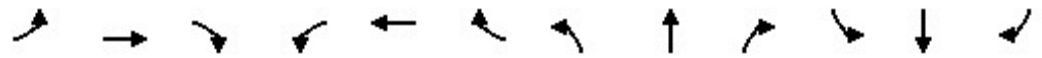


Lane Group	Ø3
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	14.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
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	

Farmington Connectivity Study  
 15: S Main St (RT 177) & Railroad Ave/New Britain Ave

2050 Scenario 2 (Build) Conditions

PM Peak



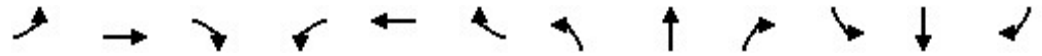
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (vph)	5	1	36	62	5	71	14	525	15	31	619	2
Future Volume (vph)	5	1	36	62	5	71	14	525	15	31	619	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		200	80		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			80			50		
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		0.95			0.97		1.00				1.00	
Frt		0.883				0.850		0.996				
Flt Protected		0.995			0.955		0.950			0.950		
Satd. Flow (prot)	0	1578	0	0	1797	1599	1787	1874	0	1787	1881	0
Flt Permitted		0.966			0.707		0.268			0.248		
Satd. Flow (perm)	0	1532	0	0	1297	1599	504	1874	0	467	1881	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			30			25				25
Link Distance (ft)		579			590			1222				584
Travel Time (s)		15.8			13.4			33.3				15.9
Confl. Peds. (#/hr)			5	5			3					3
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	5	1	40	68	5	78	15	577	16	34	680	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	46	0	0	73	78	15	593	0	34	682	0
Number of Detectors	1	1		1	1	1	0	2		1	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40	40	0	206		50	206	
Trailing Detector (ft)	0	-10		0	-10	-10	0	100		0	100	
Detector 1 Position(ft)	0	-10		0	-10	-10	0	100		0	100	
Detector 1 Size(ft)	20	50		20	50	50	20	6		50	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)								200			200	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA	pt+ov	Perm	NA		D.P+P	NA	
Protected Phases		4			4	2 4		1		2	1 2	
Permitted Phases	4			4			1			1		
Detector Phase	4	4		4	4	4	1	1		2	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		25.0	25.0		5.0		
Minimum Split (s)	10.2	10.2		10.2	10.2		29.6	29.6		9.6		
Total Split (s)	14.2	14.2		14.2	14.2		74.6	74.6		19.6		

Lane Group	Ø3
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)	
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	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	23.0
Total Split (s)	23.0

Farmington Connectivity Study  
 15: S Main St (RT 177) & Railroad Ave/New Britain Ave

2050 Scenario 2 (Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	10.8%	10.8%		10.8%	10.8%		56.8%	56.8%		14.9%		
Maximum Green (s)	10.0	10.0		10.0	10.0		70.0	70.0		15.0		
Yellow Time (s)	3.2	3.2		3.2	3.2		3.6	3.6		3.6		
All-Red Time (s)	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		
Total Lost Time (s)		4.2			4.2		4.6	4.6		4.6		
Lead/Lag	Lag	Lag		Lag	Lag		Lead	Lead		Lag		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes		
Vehicle Extension (s)	1.5	1.5		1.5	1.5		2.5	2.5		1.5		
Recall Mode	None	None		None	None		Min	Min		None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		8.4			8.4	19.1	28.8	28.8		35.5	40.4	
Actuated g/C Ratio		0.14			0.14	0.31	0.47	0.47		0.58	0.66	
v/c Ratio		0.22			0.41	0.16	0.06	0.67		0.08	0.55	
Control Delay		31.4			36.6	15.1	13.4	19.2		7.1	9.3	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		31.4			36.6	15.1	13.4	19.2		7.1	9.4	
LOS		C			D	B	B	B		A	A	
Approach Delay		31.4			25.5			19.0			9.2	
Approach LOS		C			C			B			A	
Queue Length 50th (ft)		13			21	16	2	130		3	81	
Queue Length 95th (ft)		62			#98	51	19	434		22	385	
Internal Link Dist (ft)		499			510			1142			504	
Turn Bay Length (ft)						200	80			120		
Base Capacity (vph)		267			226	558	476	1768		687	1528	
Starvation Cap Reductn		0			0	0	0	0		0	59	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.17			0.32	0.14	0.03	0.34		0.05	0.46	

Intersection Summary

Area Type: Other  
 Cycle Length: 131.4  
 Actuated Cycle Length: 61.1  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.67  
 Intersection Signal Delay: 15.4  
 Intersection LOS: B  
 Intersection Capacity Utilization 50.4%  
 ICU Level of Service A  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 15: S Main St (RT 177) & Railroad Ave/New Britain Ave



Lane Group	Ø3
Total Split (%)	18%
Maximum Green (s)	19.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	11
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	44	42	68	820	875	83
Future Volume (vph)	44	42	68	820	875	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.934			0.988		
Flt Protected	0.975			0.996		
Satd. Flow (prot)	1713	0	0	1874	1859	0
Flt Permitted	0.975			0.996		
Satd. Flow (perm)	1713	0	0	1874	1859	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	805			584	1222	
Travel Time (s)	22.0			15.9	33.3	
Confl. Peds. (#/hr)				2		2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	46	44	71	854	911	86
Shared Lane Traffic (%)						
Lane Group Flow (vph)	90	0	0	925	997	0
Sign Control	Stop			Free	Free	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	111.0%
ICU Level of Service	H
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	7.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	44	42	68	820	875	83
Future Vol, veh/h	44	42	68	820	875	83
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	46	44	71	854	911	86

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1952	956	999	0	-	0
Stage 1	956	-	-	-	-	-
Stage 2	996	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	71	314	697	-	-	-
Stage 1	375	-	-	-	-	-
Stage 2	359	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	57	313	696	-	-	-
Mov Cap-2 Maneuver	57	-	-	-	-	-
Stage 1	302	-	-	-	-	-
Stage 2	358	-	-	-	-	-

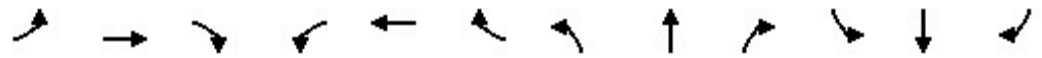
Approach	EB	NB	SB
HCM Control Delay, s	157.5	0.8	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	696	-	95	-	-
HCM Lane V/C Ratio	0.102	-	0.943	-	-
HCM Control Delay (s)	10.8	0	157.5	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	0.3	-	5.5	-	-

Farmington Connectivity Study  
 17: Plainville Ave (RT 177) & Coopermine Rd

2050 Scenario 2 (Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	145	69	33	56	108	54	87	846	75	38	614	181
Future Volume (vph)	145	69	33	56	108	54	87	846	75	38	614	181
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	1.00	1.00	1.00	1.00	1.00
Frt		0.982			0.966			0.990			0.971	
Flt Protected		0.972			0.987			0.996			0.998	
Satd. Flow (prot)	0	1796	0	0	1794	0	0	1855	0	0	1823	0
Flt Permitted		0.614			0.853			0.858			0.919	
Satd. Flow (perm)	0	1134	0	0	1550	0	0	1598	0	0	1679	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			16			6			21	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		498			472			529			491	
Travel Time (s)		9.7			9.2			10.3			9.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	149	71	34	58	111	56	90	872	77	39	633	187
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	254	0	0	225	0	0	1039	0	0	859	0
Number of Detectors	1	3		1	3		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	24		20	24		20	361		20	361	
Trailing Detector (ft)	0	-10		0	-10		0	185		0	185	
Detector 1 Position(ft)	0	-10		0	-10		0	185		0	185	
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)		6			6			355			355	
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	
Detector 3 Position(ft)		18			18							
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	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	20.5	20.5		20.5	20.5		21.9	21.9		21.9	21.9	
Total Split (s)	40.5	40.5		40.5	40.5		66.9	66.9		66.9	66.9	

Farmington Connectivity Study  
 17: Plainville Ave (RT 177) & Coopermine Rd

2050 Scenario 2 (Build) Conditions  
 PM Peak

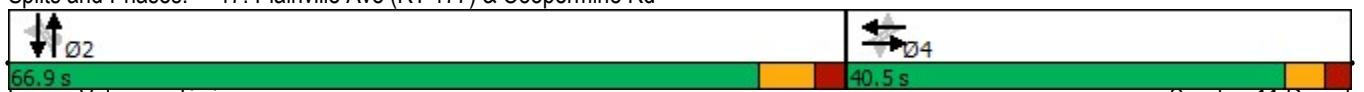


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	37.7%	37.7%		37.7%	37.7%		62.3%	62.3%		62.3%	62.3%	
Maximum Green (s)	35.0	35.0		35.0	35.0		60.0	60.0		60.0	60.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		4.4	4.4		4.4	4.4	
All-Red Time (s)	2.2	2.2		2.2	2.2		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.5			5.5			6.9			6.9	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5		1.5	1.5		5.0	5.0		5.0	5.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	14.0	14.0		14.0	14.0							
Flash Dont Walk (s)	1.0	1.0		1.0	1.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		23.5			23.5			60.4			60.4	
Actuated g/C Ratio		0.24			0.24			0.63			0.63	
v/c Ratio		0.90			0.58			1.04			0.81	
Control Delay		67.1			35.2			59.3			23.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		67.1			35.2			59.3			23.1	
LOS		E			D			E			C	
Approach Delay		67.1			35.2			59.3			23.1	
Approach LOS		E			D			E			C	
Queue Length 50th (ft)		146			112			~689			357	
Queue Length 95th (ft)		242			184			#1103			#786	
Internal Link Dist (ft)		418			392			449			411	
Turn Bay Length (ft)												
Base Capacity (vph)		419			576			1003			1060	
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		0.61			0.39			1.04			0.81	

Intersection Summary

Area Type: Other  
 Cycle Length: 107.4  
 Actuated Cycle Length: 96.4  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.04  
 Intersection Signal Delay: 44.8  
 Intersection LOS: D  
 Intersection Capacity Utilization 119.9%  
 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.

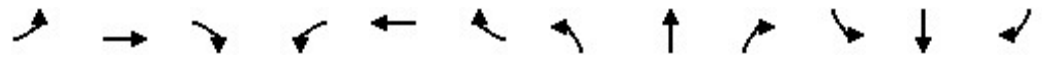
Splits and Phases: 17: Plainville Ave (RT 177) & Coopermine Rd



Farmington Connectivity Study  
 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd

2050 Scenario 2 (Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (vph)	27	109	160	47	225	101	326	1000	34	71	628	48
Future Volume (vph)	27	109	160	47	225	101	326	1000	34	71	628	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	250		0	80		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			100			40		
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		0.927			0.964			0.995			0.989	
Flt Protected		0.995			0.994		0.950			0.950		
Satd. Flow (prot)	0	1735	0	0	1803	0	1787	1872	0	1787	1860	0
Flt Permitted		0.897			0.857		0.164			0.075		
Satd. Flow (perm)	0	1564	0	0	1554	0	309	1872	0	141	1860	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					15			2			5	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		594			761			713			527	
Travel Time (s)		13.5			17.3			10.8			8.0	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	28	111	163	48	230	103	333	1020	35	72	641	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	302	0	0	381	0	333	1055	0	72	690	0
Number of Detectors	1	3		1	2		3	1		3	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	18		20	12		24	356		24	206	
Trailing Detector (ft)	0	-10		0	-6		-6	350		-6	200	
Detector 1 Position(ft)	0	-10		0	-6		-6	350		-6	200	
Detector 1 Size(ft)	20	6		20	6		6	6		6	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)		0			6		6			6		
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		
Detector 3 Position(ft)		12					18			18		
Detector 3 Size(ft)		6					6			6		
Detector 3 Type		Cl+Ex					Cl+Ex			Cl+Ex		
Detector 3 Channel												
Detector 3 Extend (s)		0.0					0.0			0.0		
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		5	2		1	6	
Switch Phase												

Farmington Connectivity Study  
 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd

2050 Scenario 2 (Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	7.0	7.0		7.0	7.0		3.0	30.0		3.0	30.0	
Minimum Split (s)	30.9	30.9		30.9	30.9		7.0	37.1		7.0	37.1	
Total Split (s)	34.9	34.9		34.9	34.9		19.0	67.1		12.0	67.1	
Total Split (%)	28.8%	28.8%		28.8%	28.8%		15.7%	55.5%		9.9%	55.5%	
Maximum Green (s)	30.0	30.0		30.0	30.0		15.0	60.0		8.0	60.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.0	4.4		3.0	4.4	
All-Red Time (s)	1.6	1.6		1.6	1.6		1.0	2.7		1.0	2.7	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.9			4.9		4.0	7.1		4.0	7.1	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)	25.0	25.0		25.0	25.0							
Flash Dont Walk (s)	1.0	1.0		1.0	1.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		30.1			30.1		73.1	61.6		61.8	52.4	
Actuated g/C Ratio		0.27			0.27		0.65	0.55		0.55	0.47	
v/c Ratio		0.72			0.89		0.88	1.02		0.43	0.79	
Control Delay		49.4			62.9		39.3	60.9		18.2	33.0	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		49.4			62.9		39.3	60.9		18.2	33.0	
LOS		D			E		D	E		B	C	
Approach Delay		49.4			62.9			55.7			31.6	
Approach LOS		D			E			E			C	
Queue Length 50th (ft)		198			256		106	~834		17	412	
Queue Length 95th (ft)		#355			#484		#265	#1129		39	573	
Internal Link Dist (ft)		514			681			633			447	
Turn Bay Length (ft)							250			80		
Base Capacity (vph)		420			428		399	1123		197	1001	
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		0.72			0.89		0.83	0.94		0.37	0.69	

Intersection Summary

Area Type: Other  
 Cycle Length: 121  
 Actuated Cycle Length: 112.1  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.02  
 Intersection Signal Delay: 49.5  
 Intersection LOS: D  
 Intersection Capacity Utilization 102.0%  
 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.

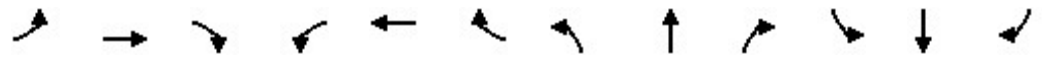
Splits and Phases: 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd



Farmington Connectivity Study  
 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)

2050 Scenario 2 (Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	148	417	124	166	735	305	132	849	96	194	594	144
Future Volume (vph)	148	417	124	166	735	305	132	849	96	194	594	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260		260	180		0	250		250	165		165
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (ft)	190			170			150			115		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor				1.00						1.00		
Frt			0.850		0.956				0.850		0.971	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1881	1599	1787	3417	0	1787	1881	1599	1787	3471	0
Flt Permitted	0.950			0.950			0.195			0.088		
Satd. Flow (perm)	1787	1881	1599	1782	3417	0	367	1881	1599	166	3471	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			120		35				65			16
Link Speed (mph)		45			45			40				45
Link Distance (ft)		780			1567			643				474
Travel Time (s)		11.8			23.7			11.0				7.2
Confl. Peds. (#/hr)			2	2					1	1		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	151	426	127	169	750	311	135	866	98	198	606	147
Shared Lane Traffic (%)												
Lane Group Flow (vph)	151	426	127	169	1061	0	135	866	98	198	753	0
Number of Detectors	3	2	2	3	2		3	3	3	3	3	
Detector Template												
Leading Detector (ft)	24	306	306	24	306		24	24	24	24	24	
Trailing Detector (ft)	-6	150	150	-6	150		-6	-6	-6	-6	-6	
Detector 1 Position(ft)	-6	150	150	-6	150		-6	-6	-6	-6	-6	
Detector 1 Size(ft)	6	6	6	6	6		6	6	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	6	300	300	6	300		6	6	6	6	6	
Detector 2 Size(ft)	6	6	6	6	6		6	6	6	6	6	
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 3 Position(ft)	18			18			18	18	18	18	18	
Detector 3 Size(ft)	6			6			6	6	6	6	6	
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0	0.0	0.0	0.0	
Turn Type	Prot	NA	Prot	Prot	NA		pm+pt	NA	pt+ov	pm+pt	NA	
Protected Phases	1	6	6	5	2		3	8	5 8	7	4	
Permitted Phases							8			4		

Lane Group	Ø9
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)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	

Farmington Connectivity Study  
 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)

2050 Scenario 2 (Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6	6	5	2		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0		5.0	9.0		5.0	9.0	
Minimum Split (s)	9.0	20.2	20.2	9.0	20.2		9.0	14.7		9.0	14.7	
Total Split (s)	25.0	35.2	35.2	25.0	45.2		22.0	50.7		14.0	45.7	
Total Split (%)	14.7%	20.7%	20.7%	14.7%	26.6%		12.9%	29.8%		8.2%	26.9%	
Maximum Green (s)	21.0	30.0	30.0	21.0	40.0		18.0	45.0		10.0	40.0	
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2		3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.2		1.0	1.2	
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)	4.0	5.2	5.2	4.0	5.2		4.0	5.7		4.0	5.7	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	2.5	2.5	1.5	2.5		2.0	3.0		2.0	2.0	
Recall Mode	None	Min	Min	None	Min		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	14.9	39.1	39.1	16.4	40.6		58.1	46.1	67.6	57.2	45.4	
Actuated g/C Ratio	0.11	0.29	0.29	0.12	0.30		0.43	0.34	0.50	0.42	0.33	
v/c Ratio	0.77	0.79	0.23	0.79	1.02		0.50	1.36	0.12	1.04	0.64	
Control Delay	86.1	57.5	9.6	84.2	77.3		31.4	207.1	6.5	110.2	43.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	86.1	57.5	9.6	84.2	77.3		31.4	207.1	6.5	110.2	43.1	
LOS	F	E	A	F	E		C	F	A	F	D	
Approach Delay		55.0			78.2			167.7			57.0	
Approach LOS		E			E			F			E	
Queue Length 50th (ft)	124	323	4	138	448		63	~932	13	114	267	
Queue Length 95th (ft)	249	#697	64	#299	#912		158	#1646	38	#421	#538	
Internal Link Dist (ft)		700			1487			563			394	
Turn Bay Length (ft)	260		260	180			250		250	165		
Base Capacity (vph)	279	560	561	279	1043		358	673	818	190	1168	
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	0.54	0.76	0.23	0.61	1.02		0.38	1.29	0.12	1.04	0.64	










Intersection Summary

Area Type: Other  
 Cycle Length: 169.9  
 Actuated Cycle Length: 136  
 Natural Cycle: 145  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.36  
 Intersection Signal Delay: 93.7  
 Intersection LOS: F  
 Intersection Capacity Utilization 109.5%  
 ICU Level of Service H  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.

Lane Group	Ø9
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	32.0
Total Split (s)	32.0
Total Split (%)	19%
Maximum Green (s)	28.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
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)	21.0
Pedestrian Calls (#/hr)	4
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	

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

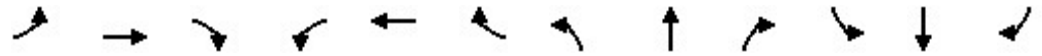
Splits and Phases: 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)

 Ø1	 Ø2	 Ø3	 Ø4	 Ø9
25 s	45.2 s	22 s	45.7 s	32 s
 Ø5	 Ø6	 Ø7	 Ø8	
25 s	35.2 s	14 s	50.7 s	

Farmington Connectivity Study  
 20: Unionville Ave (RT 177) & Northwest Dr

2050 Scenario 2 (Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	111	111	240	251	154	130	961	70	86	600	17
Future Volume (vph)	34	111	111	240	251	154	130	961	70	86	600	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	210		0	260		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
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		0.925			0.943			0.990			0.996	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1723	0	1770	1757	0	1770	3504	0	1770	3523	0
Flt Permitted	0.402			0.392			0.229			0.163		
Satd. Flow (perm)	749	1723	0	730	1757	0	426	3504	0	304	3523	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32			22			5			2	
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		710			592			572			675	
Travel Time (s)		13.8			11.5			9.8			11.5	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	35	116	116	250	261	160	135	1001	73	90	625	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	232	0	250	421	0	135	1074	0	90	643	0
Number of Detectors	3	3		3	3		3	2		3	2	
Detector Template												
Leading Detector (ft)	24	24		24	24		24	331		24	331	
Trailing Detector (ft)	-6	-6		-6	-6		-6	150		-6	150	
Detector 1 Position(ft)	-6	-6		-6	-6		-6	150		-6	150	
Detector 1 Size(ft)	6	6		6	6		6	6		6	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)	6	6		6	6		6	325		6	325	
Detector 2 Size(ft)	6	6		6	6		6	6		6	6	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 3 Position(ft)	18	18		18	18		18			18		
Detector 3 Size(ft)	6	6		6	6		6			6		
Detector 3 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex		
Detector 3 Channel												
Detector 3 Extend (s)	0.0	0.0		0.0	0.0		0.0			0.0		
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	

Lane Group	Ø9
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	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
<b>Switch Phase</b>												
Minimum Initial (s)	4.0	9.0		4.0	9.0		4.0	15.0		4.0	15.0	
Minimum Split (s)	8.0	15.2		8.0	15.2		8.0	22.5		8.0	22.5	
Total Split (s)	14.0	23.2		26.0	35.2		16.0	32.5		12.0	28.5	
Total Split (%)	10.9%	18.0%		20.2%	27.4%		12.4%	25.3%		9.3%	22.1%	
Maximum Green (s)	10.0	17.0		22.0	29.0		12.0	25.0		8.0	21.0	
Yellow Time (s)	3.0	4.1		3.0	4.1		3.0	4.8		3.0	4.8	
All-Red Time (s)	1.0	2.1		1.0	2.1		1.0	2.7		1.0	2.7	
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	6.2		4.0	6.2		4.0	7.5		4.0	7.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	3.0		1.5	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
<b>Walk Time (s)</b>												
<b>Flash Dont Walk (s)</b>												
<b>Pedestrian Calls (#/hr)</b>												
Act Effct Green (s)	27.3	19.0		38.6	30.5		37.9	27.3		34.0	23.6	
Actuated g/C Ratio	0.30	0.21		0.42	0.33		0.41	0.30		0.37	0.26	
v/c Ratio	0.12	0.61		0.55	0.70		0.45	1.02		0.41	0.71	
Control Delay	21.5	39.1		25.3	36.1		25.5	68.8		26.7	38.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	21.5	39.1		25.3	36.1		25.5	68.8		26.7	38.6	
LOS	C	D		C	D		C	E		C	D	
Approach Delay		36.8			32.1			64.0			37.1	
Approach LOS		D			C			E			D	
Queue Length 50th (ft)	10	95		84	193		43	~354		28	167	
Queue Length 95th (ft)	43	#326		234	#545		138	#808		98	#448	
Internal Link Dist (ft)		630			512			492			595	
Turn Bay Length (ft)							210			260		
Base Capacity (vph)	375	393		567	601		367	1048		250	909	
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	0.59		0.44	0.70		0.37	1.02		0.36	0.71	

**Intersection Summary**

Area Type: Other  
 Cycle Length: 128.7  
 Actuated Cycle Length: 91.6  
 Natural Cycle: 140  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.02  
 Intersection Signal Delay: 47.2  
 Intersection LOS: D  
 Intersection Capacity Utilization 77.6%  
 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.

Lane Group	Ø9
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	35.0
Total Split (s)	35.0
Total Split (%)	27%
Maximum Green (s)	31.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
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)	24.0
Pedestrian Calls (#/hr)	1
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

Queue shown is maximum after two cycles.

Splits and Phases: 20: Unionville Ave (RT 177) & Northwest Dr

↙ Ø1	↓ Ø2	↘ Ø3	→ Ø4	🚶 Ø9
16 s	28.5 s	26 s	23.2 s	35 s
↙ Ø5	↑ Ø6	↗ Ø7	← Ø8	
12 s	32.5 s	14 s	35.2 s	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	13	133	52	24	210	156	159	243	18	199	158	10
Future Volume (vph)	13	133	52	24	210	156	159	243	18	199	158	10
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	1.00	1.00	1.00	1.00	1.00
Frt		0.965			0.946			0.994			0.996	
Flt Protected		0.997			0.997			0.981			0.974	
Satd. Flow (prot)	0	1792	0	0	1757	0	0	1816	0	0	1807	0
Flt Permitted		0.997			0.997			0.981			0.974	
Satd. Flow (perm)	0	1792	0	0	1757	0	0	1816	0	0	1807	0
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		506			528			2775			437	
Travel Time (s)		9.9			10.3			63.1			9.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	14	141	55	26	223	166	169	259	19	212	168	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	210	0	0	415	0	0	447	0	0	391	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	64.9%
ICU Level of Service	C
Analysis Period (min)	15

Intersection	
Intersection Delay, s/veh	57.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	13	133	52	24	210	156	159	243	18	199	158	10
Future Vol, veh/h	13	133	52	24	210	156	159	243	18	199	158	10
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	141	55	26	223	166	169	259	19	212	168	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	22.5	56	79.8	53.7
HCM LOS	C	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	38%	7%	6%	54%
Vol Thru, %	58%	67%	54%	43%
Vol Right, %	4%	26%	40%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	420	198	390	367
LT Vol	159	13	24	199
Through Vol	243	133	210	158
RT Vol	18	52	156	10
Lane Flow Rate	447	211	415	390
Geometry Grp	1	1	1	1
Degree of Util (X)	1.028	0.533	0.929	0.909
Departure Headway (Hd)	8.279	9.325	8.221	8.554
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	442	390	444	426
Service Time	6.279	7.325	6.221	6.554
HCM Lane V/C Ratio	1.011	0.541	0.935	0.915
HCM Control Delay	79.8	22.5	56	53.7
HCM Lane LOS	F	C	F	F
HCM 95th-tile Q	13.7	3	10.6	9.8



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	138	102	69	5	120	9	166	337	8	2	134	85
Future Volume (vph)	138	102	69	5	120	9	166	337	8	2	134	85
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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.970			0.991			0.998			0.948	
Flt Protected		0.978			0.998			0.984				
Satd. Flow (prot)	0	1767	0	0	1842	0	0	1829	0	0	1766	0
Flt Permitted		0.978			0.998			0.984				
Satd. Flow (perm)	0	1767	0	0	1842	0	0	1829	0	0	1766	0
Link Speed (mph)		30			35			30			30	
Link Distance (ft)		414			396			469			2775	
Travel Time (s)		9.4			7.7			10.7			63.1	
Confl. Peds. (#/hr)			14	14			8		17	17		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)	150	111	75	5	130	10	180	366	9	2	146	92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	336	0	0	145	0	0	555	0	0	240	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	78.3%
Analysis Period (min)	15
	ICU Level of Service D

Intersection	
Intersection Delay, s/veh	33.8
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	138	102	69	5	120	9	166	337	8	2	134	85
Future Vol, veh/h	138	102	69	5	120	9	166	337	8	2	134	85
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	2	2	2	2	2	2	2	2	2
Mvmt Flow	150	111	75	5	130	10	180	366	9	2	146	92
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

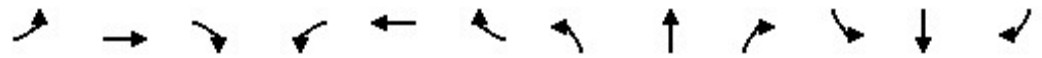
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	21.3	13.9	54.6	15.3
HCM LOS	C	B	F	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	32%	45%	4%	1%
Vol Thru, %	66%	33%	90%	61%
Vol Right, %	2%	22%	7%	38%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	511	309	134	221
LT Vol	166	138	5	2
Through Vol	337	102	120	134
RT Vol	8	69	9	85
Lane Flow Rate	555	336	146	240
Geometry Grp	1	1	1	1
Degree of Util (X)	0.965	0.637	0.306	0.453
Departure Headway (Hd)	6.257	6.939	7.555	6.794
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	578	524	478	533
Service Time	4.354	4.939	5.57	4.794
HCM Lane V/C Ratio	0.96	0.641	0.305	0.45
HCM Control Delay	54.6	21.3	13.9	15.3
HCM Lane LOS	F	C	B	C
HCM 95th-tile Q	13.1	4.4	1.3	2.3

Farmington Connectivity Study  
 23: New Britain Ave & Scott Swamp Rd (US 6)

2050 Scenario 2 (Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	659	44	22	1044	314	32	126	14	120	130	37
Future Volume (vph)	43	659	44	22	1044	314	32	126	14	120	130	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	340		0	100		320	190		0	120		0
Storage Lanes	1		0	1		1	1		0	2		0
Taper Length (ft)	150			100			100			110		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.991				0.850		0.985			0.967	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3542	0	1787	3574	1599	1787	1853	0	3467	1819	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1787	3542	0	1787	3574	1599	1787	1853	0	3467	1819	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8				338		6			15	
Link Speed (mph)		45			45			25			35	
Link Distance (ft)		3978			920			676			631	
Travel Time (s)		60.3			13.9			18.4			12.3	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	46	709	47	24	1123	338	34	135	15	129	140	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	46	756	0	24	1123	338	34	150	0	129	180	0
Number of Detectors	3	0		3	0	0	3	3		3	3	
Detector Template												
Leading Detector (ft)	24	0		24	0	0	24	24		24	24	
Trailing Detector (ft)	-10	0		-10	0	0	-6	-6		-6	-6	
Detector 1 Position(ft)	-10	0		-10	0	0	-6	-6		-6	-6	
Detector 1 Size(ft)	6	6		6	6	20	6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
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)	6			6			6	6		6	6	
Detector 2 Size(ft)	6			6			6	6		6	6	
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0		0.0	0.0	
Detector 3 Position(ft)	18			18			18	18		18	18	
Detector 3 Size(ft)	6			6			6	6		6	6	
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0		0.0	0.0	
Turn Type	Prot	NA		Prot	NA	pt+ov	Split	NA		Split	NA	
Protected Phases	1	6		5	2	2 7	8	8		7	7	
Permitted Phases												
Detector Phase	1	6		5	2	2	8	8		7	7	
Switch Phase												

Farmington Connectivity Study  
 23: New Britain Ave & Scott Swamp Rd (US 6)

2050 Scenario 2 (Build) Conditions  
 PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0		7.0	7.0	
Minimum Split (s)	9.9	20.8		11.4	20.8		34.0	34.0		13.2	13.2	
Total Split (s)	15.0	28.0		15.0	28.0		18.0	18.0		19.0	19.0	
Total Split (%)	18.8%	35.0%		18.8%	35.0%		22.5%	22.5%		23.8%	23.8%	
Maximum Green (s)	10.1	22.2		8.6	22.2		12.0	12.0		12.8	12.8	
Yellow Time (s)	3.0	4.8		3.0	4.8		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.9	1.0		3.4	1.0		2.7	2.7		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.9	5.8		6.4	5.8		6.0	6.0		6.2	6.2	
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)							27.0	27.0				
Flash Dont Walk (s)							1.0	1.0				
Pedestrian Calls (#/hr)							0	0				
Act Effct Green (s)	6.8	36.0		5.9	33.7	50.7	9.9	9.9		10.8	10.8	
Actuated g/C Ratio	0.08	0.45		0.07	0.42	0.63	0.12	0.12		0.14	0.14	
v/c Ratio	0.31	0.47		0.18	0.75	0.30	0.15	0.64		0.28	0.70	
Control Delay	39.1	19.1		38.4	24.0	6.4	31.8	44.3		31.9	44.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	39.1	19.1		38.4	24.0	6.4	31.8	44.3		31.9	44.6	
LOS	D	B		D	C	A	C	D		C	D	
Approach Delay		20.3			20.2			42.0			39.3	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	22	118		12	289	32	15	69		29	79	
Queue Length 95th (ft)	52	238		m21	#467	159	40	125		53	141	
Internal Link Dist (ft)		3898			840			596			551	
Turn Bay Length (ft)	340			100		320	190			120		
Base Capacity (vph)	225	1597		192	1504	1136	268	283		554	303	
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	0.20	0.47		0.13	0.75	0.30	0.13	0.53		0.23	0.59	

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 55 (69%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.75  
 Intersection Signal Delay: 23.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 64.0%  
 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.

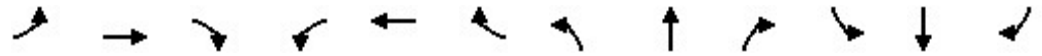
Splits and Phases: 23: New Britain Ave & Scott Swamp Rd (US 6)



Farmington Connectivity Study  
 24: Hyde Rd & Scott Swamp Rd (US 6)

2050 Scenario 2 (Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	840	24	168	1244	3	13	0	244	14	7	9
Future Volume (vph)	2	840	24	168	1244	3	13	0	244	14	7	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		0	360		0	0		0	0		0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	100			65			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996							0.850			0.850
Flt Protected	0.950			0.950				0.950			0.968	
Satd. Flow (prot)	1787	3560	0	1787	3574	0	0	1787	1599	0	1821	1599
Flt Permitted	0.950			0.950				0.909			0.795	
Satd. Flow (perm)	1787	3560	0	1787	3574	0	0	1710	1599	0	1496	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5							89			113
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1090			523			762			370	
Travel Time (s)		16.5			7.9			20.8			10.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	2	923	26	185	1367	3	14	0	268	15	8	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	949	0	185	1370	0	0	14	268	0	23	10
Number of Detectors	3	0		3	0		1	3	3	1	3	3
Detector Template							Left			Left		
Leading Detector (ft)	24	0		24	0		20	24	24	20	24	24
Trailing Detector (ft)	-10	0		-10	0		0	-10	-10	0	-10	-10
Detector 1 Position(ft)	-10	0		-10	0		0	-10	-10	0	-10	-10
Detector 1 Size(ft)	6	6		6	6		20	6	6	20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	6			6			6	6	6		6	6
Detector 2 Size(ft)	6			6			6	6	6		6	6
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0	0.0		0.0	0.0
Detector 3 Position(ft)	18			18			18	18	18		18	18
Detector 3 Size(ft)	6			6			6	6	6		6	6
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	NA		Prot	NA		Perm	NA	pm+ov	Perm	NA	Perm
Protected Phases	1	6		5	2			4	5		4	
Permitted Phases							4		4	4		4
Detector Phase	1	6		5	2		4	4	5	4	4	4
Switch Phase												

Farmington Connectivity Study  
 24: Hyde Rd & Scott Swamp Rd (US 6)

2050 Scenario 2 (Build) Conditions  
 PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0		7.0	7.0	5.0	7.0	7.0	7.0
Minimum Split (s)	10.5	21.8		10.5	21.8		30.5	30.5	10.5	30.5	30.5	30.5
Total Split (s)	15.0	45.0		15.0	45.0		20.0	20.0	15.0	20.0	20.0	20.0
Total Split (%)	18.8%	56.3%		18.8%	56.3%		25.0%	25.0%	18.8%	25.0%	25.0%	25.0%
Maximum Green (s)	9.5	39.2		9.5	39.2		14.5	14.5	9.5	14.5	14.5	14.5
Yellow Time (s)	3.0	4.8		3.0	4.8		3.3	3.3	3.0	3.3	3.3	3.3
All-Red Time (s)	2.5	1.0		2.5	1.0		2.2	2.2	2.5	2.2	2.2	2.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	5.5	5.8		5.5	5.8			5.5	5.5		5.5	5.5
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	None
Walk Time (s)		15.0			15.0		24.0	24.0		24.0	24.0	24.0
Flash Dont Walk (s)		1.0			1.0		1.0	1.0		1.0	1.0	1.0
Pedestrian Calls (#/hr)		0			0		0	0		0	0	0
Act Effct Green (s)	5.0	47.4		13.6	66.7			7.2	21.3		7.2	7.2
Actuated g/C Ratio	0.06	0.59		0.17	0.83			0.09	0.27		0.09	0.09
v/c Ratio	0.02	0.45		0.61	0.46			0.09	0.55		0.17	0.04
Control Delay	51.0	8.2		40.3	3.4			34.8	19.0		36.8	0.3
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	51.0	8.2		40.3	3.4			34.8	19.0		36.8	0.3
LOS	D	A		D	A			C	B		D	A
Approach Delay		8.3			7.8			19.8			25.8	
Approach LOS		A			A			B			C	
Queue Length 50th (ft)	1	198		80	67			7	66		11	0
Queue Length 95th (ft)	m3	191		m136	187			24	125		33	0
Internal Link Dist (ft)		1010			443			682			290	
Turn Bay Length (ft)	130			360								
Base Capacity (vph)	212	2111		304	2980			309	490		271	382
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	0.01	0.45		0.61	0.46			0.05	0.55		0.08	0.03

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 27 (34%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.61  
 Intersection Signal Delay: 9.4 Intersection LOS: A  
 Intersection Capacity Utilization 60.5% ICU Level of Service B  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 24: Hyde Rd & Scott Swamp Rd (US 6)





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	
Traffic Volume (vph)	783	324	170	1074	327	40
Future Volume (vph)	783	324	170	1074	327	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		350	350		380	0
Storage Lanes		1	1		1	0
Taper Length (ft)			100		130	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	0.95
Frt		0.850			0.984	
Flt Protected			0.950		0.957	
Satd. Flow (prot)	3574	1599	1787	3574	3437	0
Flt Permitted			0.950		0.957	
Satd. Flow (perm)	3574	1599	1787	3574	3437	0
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			45	30	
Link Distance (ft)	1087			600	782	
Travel Time (s)	16.5			9.1	17.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	851	352	185	1167	355	43
Shared Lane Traffic (%)						
Lane Group Flow (vph)	851	352	185	1167	398	0
Number of Detectors	0	0	3	0	1	
Detector Template						
Leading Detector (ft)	0	0	24	0	56	
Trailing Detector (ft)	0	0	-10	0	50	
Detector 1 Position(ft)	0	0	-10	0	50	
Detector 1 Size(ft)	6	20	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)			6			
Detector 2 Size(ft)			6			
Detector 2 Type			Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)			0.0			
Detector 3 Position(ft)			18			
Detector 3 Size(ft)			6			
Detector 3 Type			Cl+Ex			
Detector 3 Channel						
Detector 3 Extend (s)			0.0			
Turn Type	NA	pm+ov	Prot	NA	Prot	
Protected Phases	2	3	1	12	3	
Permitted Phases		2				
Detector Phase	2	3	1	2	3	
Switch Phase						

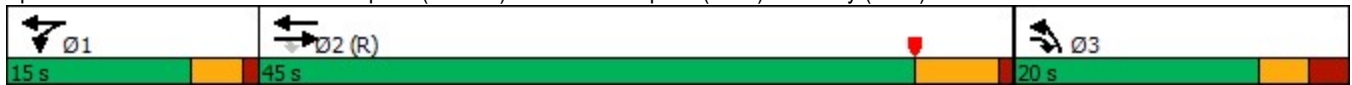


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	15.0	7.0	5.0		7.0	
Minimum Split (s)	21.0	29.5	9.0		29.5	
Total Split (s)	45.0	20.0	15.0		20.0	
Total Split (%)	56.3%	25.0%	18.8%		25.0%	
Maximum Green (s)	39.0	14.5	11.0		14.5	
Yellow Time (s)	5.0	3.0	3.0		3.0	
All-Red Time (s)	1.0	2.5	1.0		2.5	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.0	5.5	4.0		5.5	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	2.0		3.0	
Recall Mode	C-Max	None	Min		None	
Walk Time (s)		23.0			23.0	
Flash Dont Walk (s)		1.0			1.0	
Pedestrian Calls (#/hr)		0			0	
Act Effct Green (s)	41.1	59.8	10.7	57.8	12.7	
Actuated g/C Ratio	0.51	0.75	0.13	0.72	0.16	
v/c Ratio	0.46	0.29	0.77	0.45	0.73	
Control Delay	18.4	2.1	56.4	5.5	40.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	18.4	2.1	56.4	5.5	40.2	
LOS	B	A	E	A	D	
Approach Delay	13.6			12.4	40.2	
Approach LOS	B			B	D	
Queue Length 50th (ft)	156	15	89	106	97	
Queue Length 95th (ft)	243	19	#189	149	141	
Internal Link Dist (ft)	1007			520	702	
Turn Bay Length (ft)		350	350		380	
Base Capacity (vph)	1835	1231	251	2582	622	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.46	0.29	0.74	0.45	0.64	

**Intersection Summary**

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 18 (23%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 16.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 54.6%  
 ICU Level of Service A  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 25: Scott Swamp Rd (RT 552) & Scott Swamp Rd (US 6)/Colt Hwy (US 6)





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3
Lane Configurations							
Traffic Volume (vph)	153	153	212	368	541	218	
Future Volume (vph)	153	153	212	368	541	218	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor				1.00	0.99		
Frt	0.932				0.961		
Flt Protected	0.976			0.982			
Satd. Flow (prot)	1711	0	0	1847	1794	0	
Flt Permitted	0.976			0.083			
Satd. Flow (perm)	1711	0	0	156	1794	0	
Right Turn on Red		No				Yes	
Satd. Flow (RTOR)					19		
Link Speed (mph)	30			30	30		
Link Distance (ft)	345			413	499		
Travel Time (s)	7.8			9.4	11.3		
Confl. Peds. (#/hr)			4			4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	
Adj. Flow (vph)	158	158	219	379	558	225	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	316	0	0	598	783	0	
Number of Detectors	2		1	1	1		
Detector Template			Left				
Leading Detector (ft)	18		20	206	206		
Trailing Detector (ft)	0		0	200	200		
Detector 1 Position(ft)	0		0	200	200		
Detector 1 Size(ft)	6		20	6	6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		
Detector 2 Position(ft)	12						
Detector 2 Size(ft)	6						
Detector 2 Type	Cl+Ex						
Detector 2 Channel							
Detector 2 Extend (s)	0.0						
Turn Type	Prot		D.P+P	NA	NA		
Protected Phases	4		1	12	2	3	
Permitted Phases			2				
Detector Phase	4		1	1	2		
Switch Phase							
Minimum Initial (s)	5.0		3.0		15.0	1.0	
Minimum Split (s)	9.0		7.0		22.2	25.0	
Total Split (s)	34.0		12.0		39.2	25.0	
Total Split (%)	30.9%		10.9%		35.6%	23%	
Maximum Green (s)	30.0		8.0		32.0	21.0	
Yellow Time (s)	3.0		3.0		4.1	4.0	

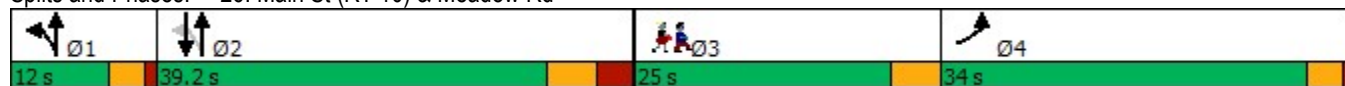


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3
All-Red Time (s)	1.0		1.0		3.1		0.0
Lost Time Adjust (s)	0.0				0.0		
Total Lost Time (s)	4.0				7.2		
Lead/Lag	Lag		Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	3.0		3.0		5.0		3.0
Recall Mode	None		Max		Min		None
Walk Time (s)							7.0
Flash Dont Walk (s)							14.0
Pedestrian Calls (#/hr)							6
Act Effct Green (s)	19.3			44.5	33.0		
Actuated g/C Ratio	0.24			0.56	0.41		
v/c Ratio	0.77			2.29	1.04		
Control Delay	42.0			611.6	70.3		
Queue Delay	0.0			0.0	0.0		
Total Delay	42.0			611.6	70.3		
LOS	D			F	E		
Approach Delay	42.0			611.6	70.3		
Approach LOS	D			F	E		
Queue Length 50th (ft)	133			~417	335		
Queue Length 95th (ft)	301			#941	#995		
Internal Link Dist (ft)	265			333	419		
Turn Bay Length (ft)							
Base Capacity (vph)	662			261	752		
Starvation Cap Reductn	0			0	0		
Spillback Cap Reductn	0			0	0		
Storage Cap Reductn	0			0	0		
Reduced v/c Ratio	0.48			2.29	1.04		

Intersection Summary

Area Type: Other  
 Cycle Length: 110.2  
 Actuated Cycle Length: 79.8  
 Natural Cycle: 150  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 2.29  
 Intersection Signal Delay: 255.8  
 Intersection LOS: F  
 Intersection Capacity Utilization 103.5%  
 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.

Splits and Phases: 26: Main St (RT 10) & Meadow Rd





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	23	32	43	518	209	45
Future Volume (vph)	23	32	43	518	209	45
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	0.921			0.976		
Flt Protected	0.980			0.996		
Satd. Flow (prot)	1681	0	0	1855	1818	0
Flt Permitted	0.980			0.996		
Satd. Flow (perm)	1681	0	0	1855	1818	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	506			401	691	
Travel Time (s)	11.5			9.1	15.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	25	35	47	563	227	49
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	0	0	610	276	0
Sign Control	Stop			Free	Free	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.7%
ICU Level of Service	B
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	23	32	43	518	209	45
Future Vol, veh/h	23	32	43	518	209	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	35	47	563	227	49

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	909	252	276	0	0
Stage 1	252	-	-	-	-
Stage 2	657	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	305	787	1287	-	-
Stage 1	790	-	-	-	-
Stage 2	516	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	289	787	1287	-	-
Mov Cap-2 Maneuver	289	-	-	-	-
Stage 1	748	-	-	-	-
Stage 2	516	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.1	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1287	-	457	-	-
HCM Lane V/C Ratio	0.036	-	0.131	-	-
HCM Control Delay (s)	7.9	0	14.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	18	21	48	438	258	32
Future Volume (vph)	18	21	48	438	258	32
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	0.928				0.985	
Flt Protected	0.977			0.995		
Satd. Flow (prot)	1689	0	0	1853	1835	0
Flt Permitted	0.977			0.995		
Satd. Flow (perm)	1689	0	0	1853	1835	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	263			231	224	
Travel Time (s)	6.0			5.3	5.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	23	52	476	280	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	43	0	0	528	315	0
Sign Control	Stop			Free	Free	

Intersection Summary

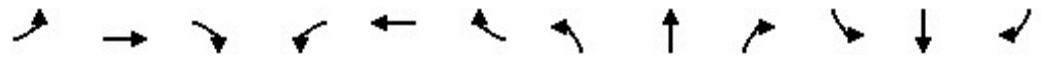
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	54.6%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	18	21	48	438	258	32
Future Vol, veh/h	18	21	48	438	258	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	23	52	476	280	35

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	878	298	315	0	-	0
Stage 1	298	-	-	-	-	-
Stage 2	580	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	318	741	1245	-	-	-
Stage 1	753	-	-	-	-	-
Stage 2	560	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	300	741	1245	-	-	-
Mov Cap-2 Maneuver	300	-	-	-	-	-
Stage 1	710	-	-	-	-	-
Stage 2	560	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1245	-	441	-	-
HCM Lane V/C Ratio	0.042	-	0.096	-	-
HCM Control Delay (s)	8	0	14	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	26	69	3	11	171	21	3	0	5	25	2	28
Future Volume (vph)	26	69	3	11	171	21	3	0	5	25	2	28
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	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.986			0.916			0.931	
Flt Protected		0.987			0.997			0.982			0.978	
Satd. Flow (prot)	0	1831	0	0	1831	0	0	1676	0	0	1696	0
Flt Permitted		0.987			0.997			0.982			0.978	
Satd. Flow (perm)	0	1831	0	0	1831	0	0	1676	0	0	1696	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		300			231			234			261	
Travel Time (s)		6.8			5.3			5.3			5.9	
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)	28	75	3	12	186	23	3	0	5	27	2	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	106	0	0	221	0	0	8	0	0	59	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 25.0% ICU Level of Service A

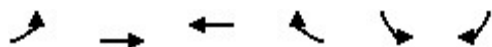
Analysis Period (min) 15

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

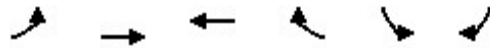
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	26	69	3	11	171	21	3	0	5	25	2	28
Future Vol, veh/h	26	69	3	11	171	21	3	0	5	25	2	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	75	3	12	186	23	3	0	5	27	2	30
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	8.5	7.5	7.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	38%	27%	5%	45%
Vol Thru, %	0%	70%	84%	4%
Vol Right, %	62%	3%	10%	51%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	8	98	203	55
LT Vol	3	26	11	25
Through Vol	0	69	171	2
RT Vol	5	3	21	28
Lane Flow Rate	9	107	221	60
Geometry Grp	1	1	1	1
Degree of Util (X)	0.011	0.126	0.25	0.074
Departure Headway (Hd)	4.42	4.257	4.084	4.444
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	814	829	869	811
Service Time	2.423	2.353	2.158	2.445
HCM Lane V/C Ratio	0.011	0.129	0.254	0.074
HCM Control Delay	7.5	8	8.5	7.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0.4	1	0.2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	47	27	177	465	407	69
Future Volume (vph)	47	27	177	465	407	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200			100	200	0
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	1863	1863	1583	1770	1583
Flt Permitted	0.479				0.950	
Satd. Flow (perm)	892	1863	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				505		75
Link Speed (mph)		30	30		30	
Link Distance (ft)		755	691		1010	
Travel Time (s)		17.2	15.7		23.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	51	29	192	505	442	75
Shared Lane Traffic (%)						
Lane Group Flow (vph)	51	29	192	505	442	75
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
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	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases	6			2		4
Detector Phase	1	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	9.0	31.0	31.0	21.0	21.0
Total Split (s)	13.0	44.0	31.0	31.0	21.0	21.0
Total Split (%)	20.0%	67.7%	47.7%	47.7%	32.3%	32.3%
Maximum Green (s)	9.0	40.0	27.0	27.0	17.0	17.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0

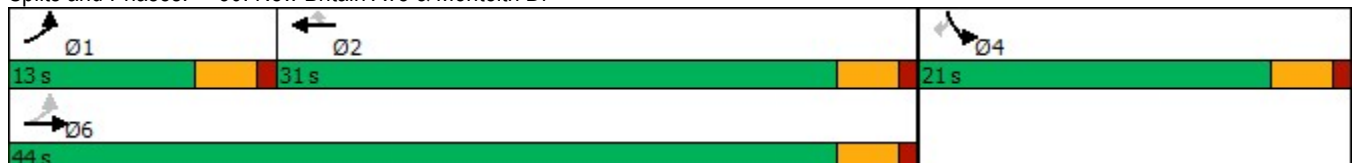


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag		Lag	
Lead-Lag Optimize?	Yes		Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Min	Min	Min	None	None
Walk Time (s)			7.0	7.0	7.0	7.0
Flash Dont Walk (s)			20.0	20.0	10.0	10.0
Pedestrian Calls (#/hr)			0	0	0	0
Act Effct Green (s)	15.5	15.5	12.1	12.1	16.8	16.8
Actuated g/C Ratio	0.38	0.38	0.30	0.30	0.41	0.41
v/c Ratio	0.11	0.04	0.35	0.61	0.61	0.11
Control Delay	7.3	6.6	14.3	5.3	18.6	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.3	6.6	14.3	5.3	18.6	4.8
LOS	A	A	B	A	B	A
Approach Delay		7.0	7.8		16.6	
Approach LOS		A	A		B	
Queue Length 50th (ft)	7	4	28	0	56	0
Queue Length 95th (ft)	19	12	87	53	#276	24
Internal Link Dist (ft)		675	611		930	
Turn Bay Length (ft)	200			100	200	
Base Capacity (vph)	557	1681	1315	1266	787	745
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	0.09	0.02	0.15	0.40	0.56	0.10

**Intersection Summary**

Area Type: Other  
 Cycle Length: 65  
 Actuated Cycle Length: 40.8  
 Natural Cycle: 65  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.61  
 Intersection Signal Delay: 11.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 46.0%  
 ICU Level of Service A  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

**Splits and Phases: 30: New Britain Ave & Monteith Dr**





# **Appendix F    Potential Future (2050) Conditions Analysis Data**

## **Farmington Area Connectivity Study**

**Capitol Region Council of Governments and Town of Farmington**

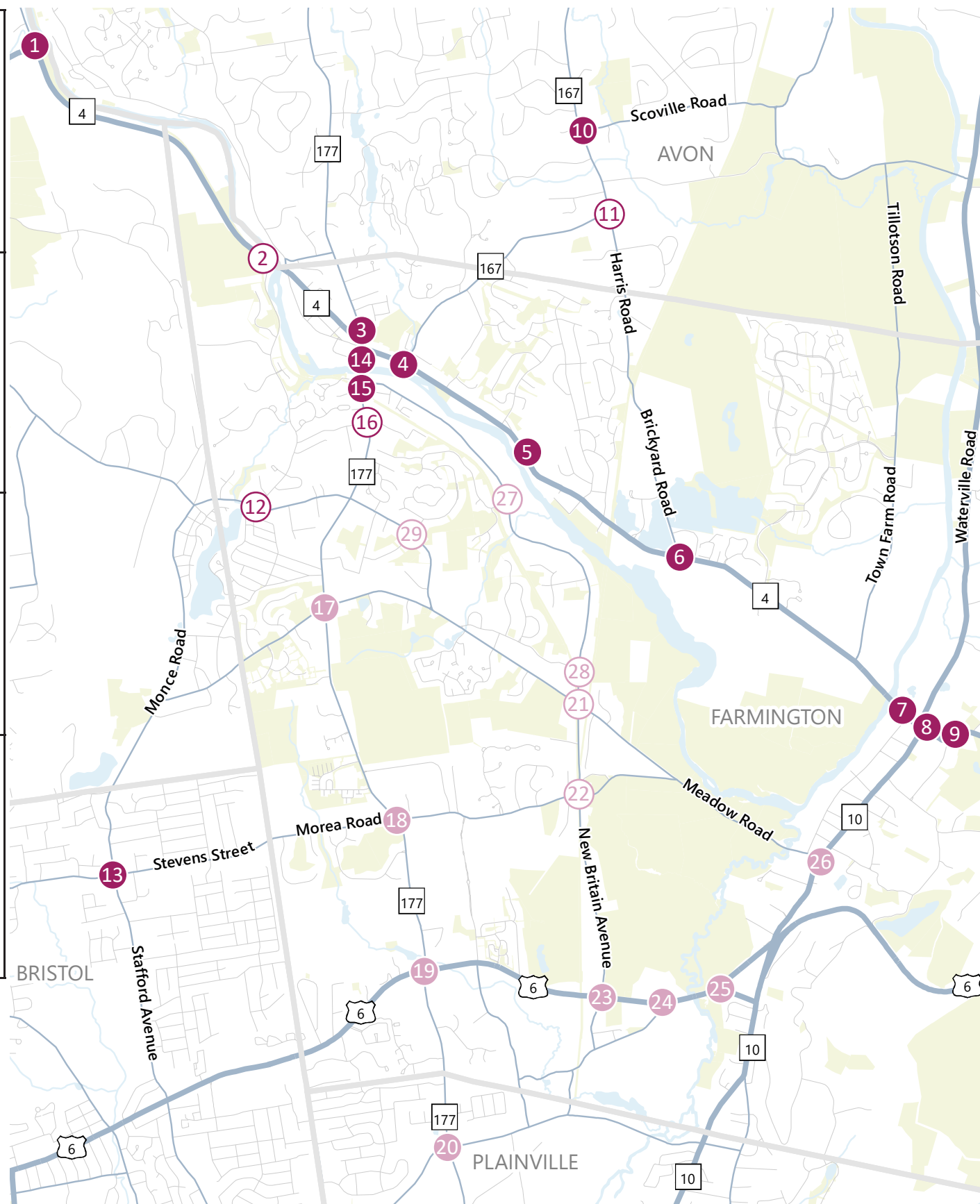
SLR Project No.: 141.12020.00019

January 16, 2024

<p><b>1</b></p> <p>221 [445] 339 [308]</p> <p>Canton Rd (Rt 179)</p> <p>Spielman Hwy (Rt 4)</p> <p>320 [366] 438 [445]</p> <p>222 [537] 219 [457]</p>	<p><b>2</b></p> <p>649 [610] 102 [73]</p> <p>River Rd</p> <p>47 [100] 595 [474]</p> <p>421 [615] 705 [415]</p> <p>Collinsville Rd (Rt 4)</p>	<p><b>3</b></p> <p>426 [485] 3 [9] 2 [3] 1 [0] 73 [51]</p> <p>S Main St (Rt 177)</p> <p>46 [61] 247 [523] 37 [41] 1 [1]</p> <p>Farmington Ave (Rt 4)</p>	<p><b>4</b></p> <p>109 [212] 70 [70]</p> <p>W Avon Rd (Rt 167)</p> <p>55 [88] 454 [624]</p> <p>Farmington Ave (Rt 4)</p>
<p><b>5</b></p> <p>465 [93] 558 [85]</p> <p>Monteith Dr</p> <p>341 [147] 395 [683]</p> <p>Farmington Ave (Rt 4)</p> <p>205 [197] 481 [736]</p>	<p><b>6</b></p> <p>71 [99] 24 [26] 416 [315]</p> <p>Brickyard Rd</p> <p>161 [287] 619 [733] 53 [55]</p> <p>Farmington Ave (Rt 4)</p> <p>50 [101] 673 [816] 15 [42]</p> <p>Bridgewater Rd</p> <p>17 [59] 2 [37] 36 [66]</p>	<p><b>7</b></p> <p>1219 [1359] 120 [137]</p> <p>Garden St</p> <p>198 [132] 46 [17]</p> <p>773 [937] 16 [15]</p> <p>Farmington Ave (Rt 4)</p>	<p><b>8</b></p> <p>24 [10] 154 [206] 250 [225]</p> <p>Waterville Rd (Rt 10)</p> <p>244 [91] 588 [740] 56 [90]</p> <p>Farmington Ave (Rt 4)</p> <p>13 [1] 1167 [1064] 157 [283]</p> <p>119 [238] 173 [167] 127 [90]</p>
<p><b>9</b></p> <p>3 [4] 0 [3] 4 [6]</p> <p>Backage Rd</p> <p>8 [5] 883 [870] 28 [44]</p> <p>Farmington Ave (Rt 4)</p> <p>10 [7] 1476 [1321] 36 [49]</p> <p>High St</p> <p>36 [87] 1 [1] 190 [70]</p>	<p><b>10</b></p> <p>3 [39] 446 [515] 101 [56]</p> <p>W Avon Rd (Rt 167)</p> <p>63 [96] 3 [2] 62 [57]</p> <p>Scoville Rd</p> <p>6 [10] 1 [9] 0 [7]</p> <p>Sycamore Hills Rd</p> <p>2 [3] 384 [448] 70 [53]</p>	<p><b>11</b></p> <p>84 [259] 355 [339]</p> <p>W Avon Rd (Rt 167)</p> <p>238 [157] 97 [42]</p> <p>Harris Rd</p> <p>29 [67] 171 [311]</p>	<p><b>12</b></p> <p>115 [166] 53 [49]</p> <p>River Rd</p> <p>19 [94] 40 [208]</p> <p>Burlington Rd</p> <p>102 [158] 220 [122]</p>
<p><b>13</b></p> <p>31 [44] 193 [197] 51 [20]</p> <p>Stafford Ave</p> <p>16 [34] 117 [335] 91 [76]</p> <p>Stevens St</p> <p>20 [43] 287 [180] 95 [73]</p> <p>57 [155] 110 [272] 74 [69]</p>	<p><b>14</b></p> <p>0 [0] 0 [0] 1 [155]</p> <p>S Main St (Rt 177)</p> <p>51 [53] 8 [45] 0 [0]</p> <p>Mill St</p> <p>53 [0] 112 [33] 0 [0]</p> <p>0 [0] 0 [0] 0 [0]</p>	<p><b>15</b></p> <p>0 [0] 0 [0] 0 [0]</p> <p>S Main St (Rt 177)</p> <p>0 [0] 1 [1] 44 [117]</p> <p>New Britain Ave</p> <p>0 [0] 5 [0] 49 [51]</p> <p>19 [19] 0 [0] 87 [29]</p>	<p><b>16</b></p> <p>4 [3] 113 [381]</p> <p>Plainville Ave (Rt 177)</p> <p>3 [1] 367 [218]</p> <p>Webster St</p> <p>213 [199] 157 [149]</p>

**LEGEND**

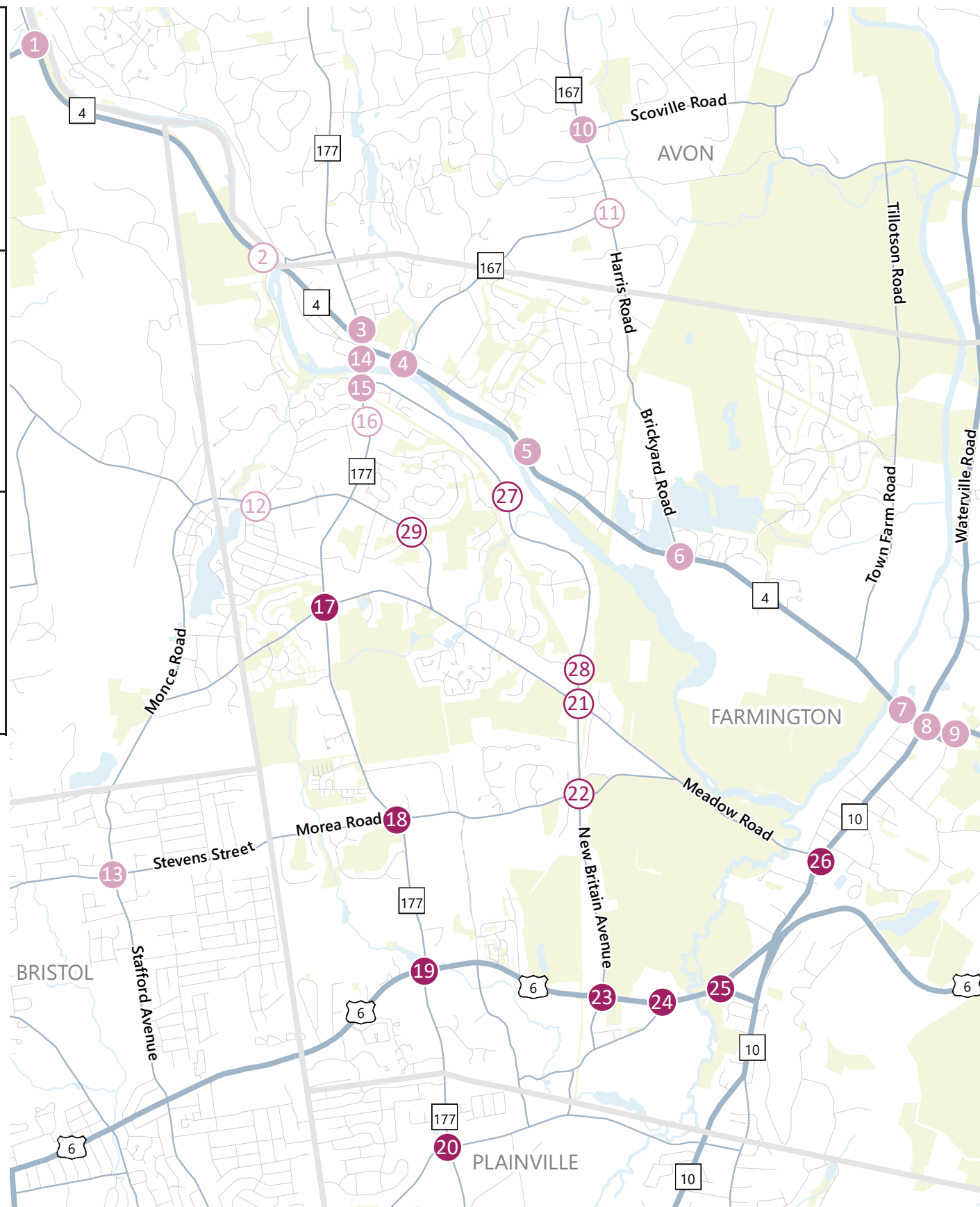
- Signalized Study Intersection
- Unsignalized Study Intersection
- Weekday AM [PM] Peak Hour Vehicle Volume



<p><b>17</b></p> <p>39 [92] 582 [443] 41 [23]</p> <p>Plainville Ave (Rt 177)</p> <p>10 [46] 21 [106] 81 [78]</p> <p>Coppermine Rd</p> <p>55 [72] 84 [46] 61 [27]</p> <p>34 [78] 377 [653] 110 [78]</p>	<p><b>18</b></p> <p>22 [44] 729 [515] 81 [57]</p> <p>Plainville Ave (Rt 177)</p> <p>29 [91] 49 [225] 16 [41]</p> <p>Meadow Rd</p> <p>45 [27] 209 [100] 265 [150]</p> <p>108 [292] 481 [815] 32 [26]</p>	<p><b>19</b></p> <p>59 [115] 822 [507] 250 [174]</p> <p>Plainville Ave (Rt 177)</p> <p>70 [284] 293 [748] 124 [180]</p> <p>Scott Swamp Rd (Rt 6)</p> <p>78 [130] 718 [448] 167 [127]</p> <p>92 [128] 453 [757] 152 [105]</p>	<p><b>20</b></p> <p>73 [15] 786 [559] 120 [81]</p> <p>Unionville Ave (Rt 177)</p> <p>45 [140] 151 [259] 34 [250]</p> <p>Northwest Dr</p> <p>34 [30] 190 [113] 81 [111]</p> <p>235 [139] 521 [906] 159 [77]</p>
<p><b>21</b></p> <p>5 [3] 93 [63] 115 [152]</p> <p>New Britain Ave</p> <p>41 [137] 66 [224] 11 [28]</p> <p>Red Oak Hill Rd</p> <p>5 [6] 270 [166] 77 [34]</p> <p>17 [119] 35 [149] 8 [29]</p>	<p><b>22</b></p> <p>48 [40] 156 [91] 0 [2]</p> <p>New Britain Ave</p> <p>0 [9] 81 [118] 20 [7]</p> <p>Meadow Rd</p> <p>52 [77] 156 [109] 101 [54]</p> <p>27 [149] 68 [312] 5 [14]</p>	<p><b>23</b></p> <p>44 [22] 74 [91] 130 [99]</p> <p>New Britain Ave</p> <p>71 [330] 548 [1029] 10 [26]</p> <p>Scott Swamp Rd (Rt 6)</p> <p>25 [33] 854 [678] 34 [38]</p> <p>28 [27] 31 [111] 10 [16]</p>	<p><b>24</b></p> <p>1 [9] 1 [7] 2 [16]</p> <p>Hyde Rd</p> <p>21 [3] 620 [1229] 159 [174]</p> <p>Scott Swamp Rd (Rt 6)</p> <p>8 [2] 1052 [891] 6 [23]</p> <p>3 [12] 6 [0] 56 [255]</p>
<p><b>25</b></p> <p>706 [1161] 106 [179]</p> <p>Colt Hwy (Rt 6)</p> <p>1025 [793] 168 [322]</p> <p>166 [323] 17 [40]</p>	<p><b>26</b></p> <p>78 [200] 322 [632]</p> <p>Main St (Rt 10)</p> <p>326 [142] 132 [158]</p> <p>85 [227] 453 [451]</p>	<p><b>27</b></p> <p>3 [12] 68 [55]</p> <p>Oakridge</p> <p>7 [6] 12 [8]</p> <p>5 [11] 48 [137]</p>	<p><b>28</b></p> <p>7 [21] 151 [166]</p> <p>Coppermine Rd</p> <p>10 [12] 25 [14]</p> <p>9 [31] 122 [282]</p>
<p><b>29</b></p> <p>23 [29] 1 [2] 27 [26]</p> <p>Chaffee Ln</p> <p>28 [22] 88 [177] 15 [11]</p> <p>W District Rd</p> <p>33 [27] 111 [71] 0 [4]</p> <p>2 [4] 0 [0] 21 [5]</p>			

**LEGEND**

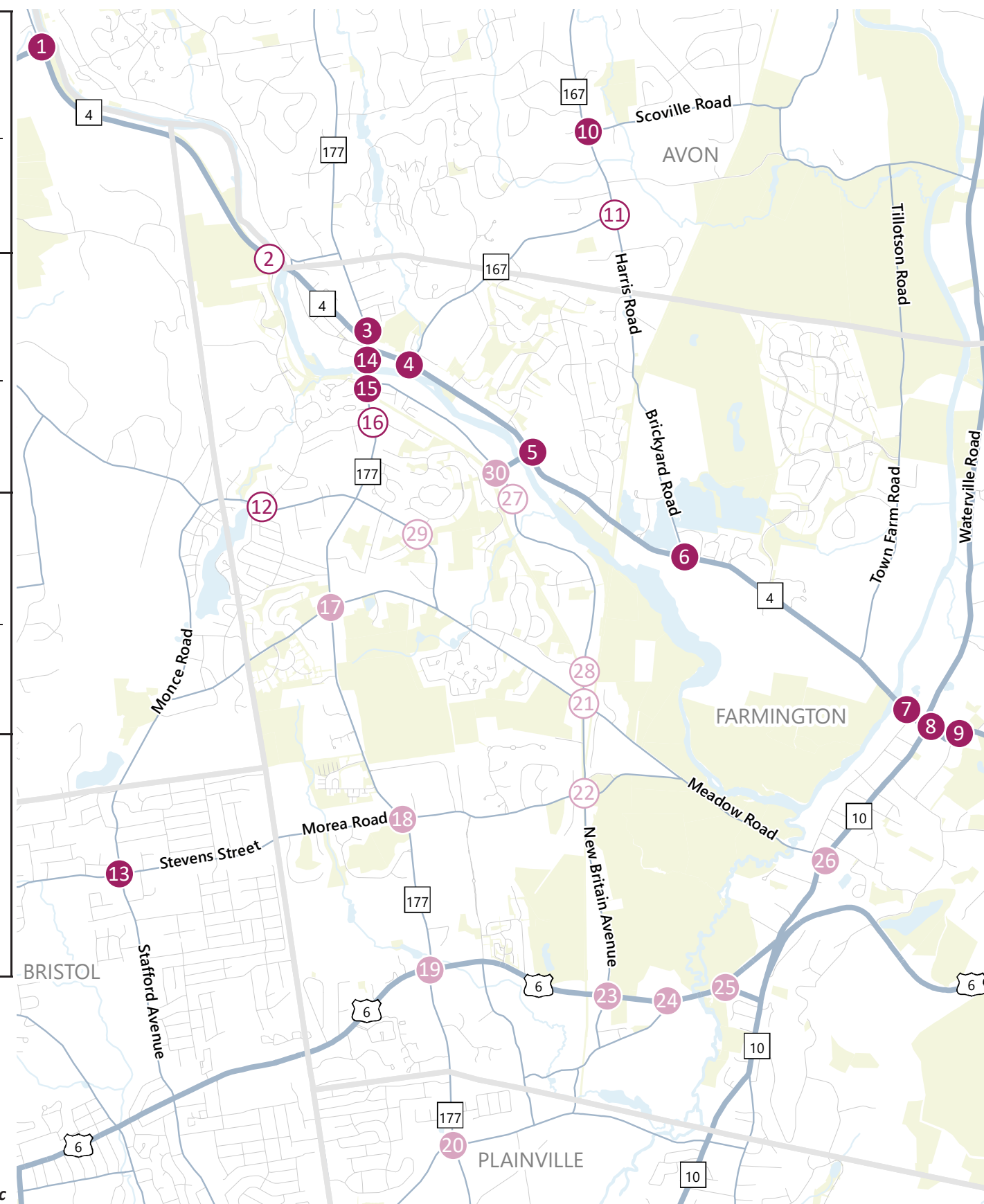
- Signalized Study Intersection
- Unsignalized Study Intersection
- ← X [Y] Weekday AM [PM] Peak Hour Vehicle Volume



<p><b>1</b></p> <p>211 [410] 348 [323]</p> <p>Canton Rd (Rt 179)</p> <p>Spielman Hwy (Rt 4)</p> <p>302 [323] 431 [415]</p> <p>215 [524] 219 [482]</p>	<p><b>2</b></p> <p>619 [550] 118 [92]</p> <p>River Rd</p> <p>407 [603] 485 [286]</p> <p>Collinsville Rd (Rt 4)</p> <p>52 [128] 388 [303]</p>	<p><b>3</b></p> <p>5 [8] 376 [429] 1 [1] 2 [5]</p> <p>3 [9] 2 [3] 1 [0]</p> <p>S Main St (Rt 177)</p> <p>75 [72]</p> <p>44 [63] 234 [424] 36 [42] 1 [1]</p> <p>Farmington Ave (Rt 4)</p> <p>0 [9] 0 [0] 122 [147] 2 [2]</p> <p>0 [1] 0 [0] 0 [0] 0 [0]</p>	<p><b>4</b></p> <p>59 [157] 134 [196]</p> <p>W Avon Rd (Rt 167)</p> <p>163 [170] 571 [649]</p> <p>Farmington Ave (Rt 4)</p> <p>114 [96] 768 [809]</p>
<p><b>5</b></p> <p>107 [12] 126 [31] 99 [10]</p> <p>Monteith Dr</p> <p>320 [31] 356 [557] 265 [249]</p> <p>Farmington Ave (Rt 4)</p> <p>254 [70] 345 [607] 394 [348]</p> <p>268 [435] 188 [70] 318 [258]</p>	<p><b>6</b></p> <p>94 [110] 38 [36] 433 [330]</p> <p>Brickyard Rd</p> <p>168 [298] 577 [689] 57 [61]</p> <p>Farmington Ave (Rt 4)</p> <p>65 [108] 636 [735] 22 [49]</p> <p>Bridgewater Rd</p> <p>23 [71] 3 [49] 37 [72]</p> <p>718 [872] 15 [14]</p> <p>Farmington Ave (Rt 4)</p>	<p><b>7</b></p> <p>1162 [1245] 110 [121]</p> <p>Garden St</p> <p>167 [122] 41 [16]</p> <p>Farmington Ave (Rt 4)</p>	<p><b>8</b></p> <p>20 [9] 126 [172] 260 [225]</p> <p>Waterville Rd (Rt 10)</p> <p>242 [97] 574 [713] 54 [84]</p> <p>Farmington Ave (Rt 4)</p> <p>11 [1] 1150 [1036] 122 [230]</p> <p>92 [185] 135 [143] 122 [81]</p>
<p><b>9</b></p> <p>3 [3] 0 [3] 4 [6]</p> <p>Backage Rd</p> <p>7 [5] 887 [853] 28 [48]</p> <p>Farmington Ave (Rt 4)</p> <p>8 [7] 1469 [1318] 34 [45]</p> <p>High St</p> <p>31 [77] 1 [1] 175 [76]</p>	<p><b>10</b></p> <p>3 [37] 504 [643] 147 [59]</p> <p>W Avon Rd (Rt 167)</p> <p>64 [95] 3 [1] 77 [61]</p> <p>Scoville Rd</p> <p>5 [10] 1 [9] 0 [8]</p> <p>Sycamore Hills Rd</p> <p>2 [3] 497 [510] 144 [56]</p>	<p><b>11</b></p> <p>96 [340] 404 [373]</p> <p>W Avon Rd (Rt 167)</p> <p>310 [198] 134 [62]</p> <p>Harris Rd</p> <p>36 [96] 201 [318]</p>	<p><b>12</b></p> <p>112 [174] 45 [32]</p> <p>River Rd</p> <p>17 [61] 40 [198]</p> <p>Burlington Rd</p> <p>102 [166] 215 [115]</p>
<p><b>13</b></p> <p>35 [58] 188 [215] 45 [25]</p> <p>Stafford Ave</p> <p>22 [35] 135 [332] 89 [62]</p> <p>Stevens St</p> <p>31 [47] 291 [181] 104 [63]</p> <p>53 [151] 124 [276] 55 [64]</p>	<p><b>14</b></p> <p>0 [0] 0 [0] 2 [121]</p> <p>S Main St (Rt 177)</p> <p>43 [39] 8 [50] 0 [0]</p> <p>Mill St</p> <p>44 [0] 94 [28] 0 [0]</p> <p>0 [0] 0 [0] 0 [0]</p>	<p><b>15</b></p> <p>0 [0] 0 [0] 0 [0]</p> <p>S Main St (Rt 177)</p> <p>0 [0] 1 [1] 61 [200]</p> <p>New Britain Ave</p> <p>0 [0] 5 [0] 51 [53]</p> <p>20 [19] 0 [0] 172 [50]</p>	<p><b>16</b></p> <p>3 [3] 146 [578]</p> <p>Plainville Ave (Rt 177)</p> <p>3 [1]</p> <p>Webster St</p> <p>114 [154] 286 [222]</p>

**LEGEND**

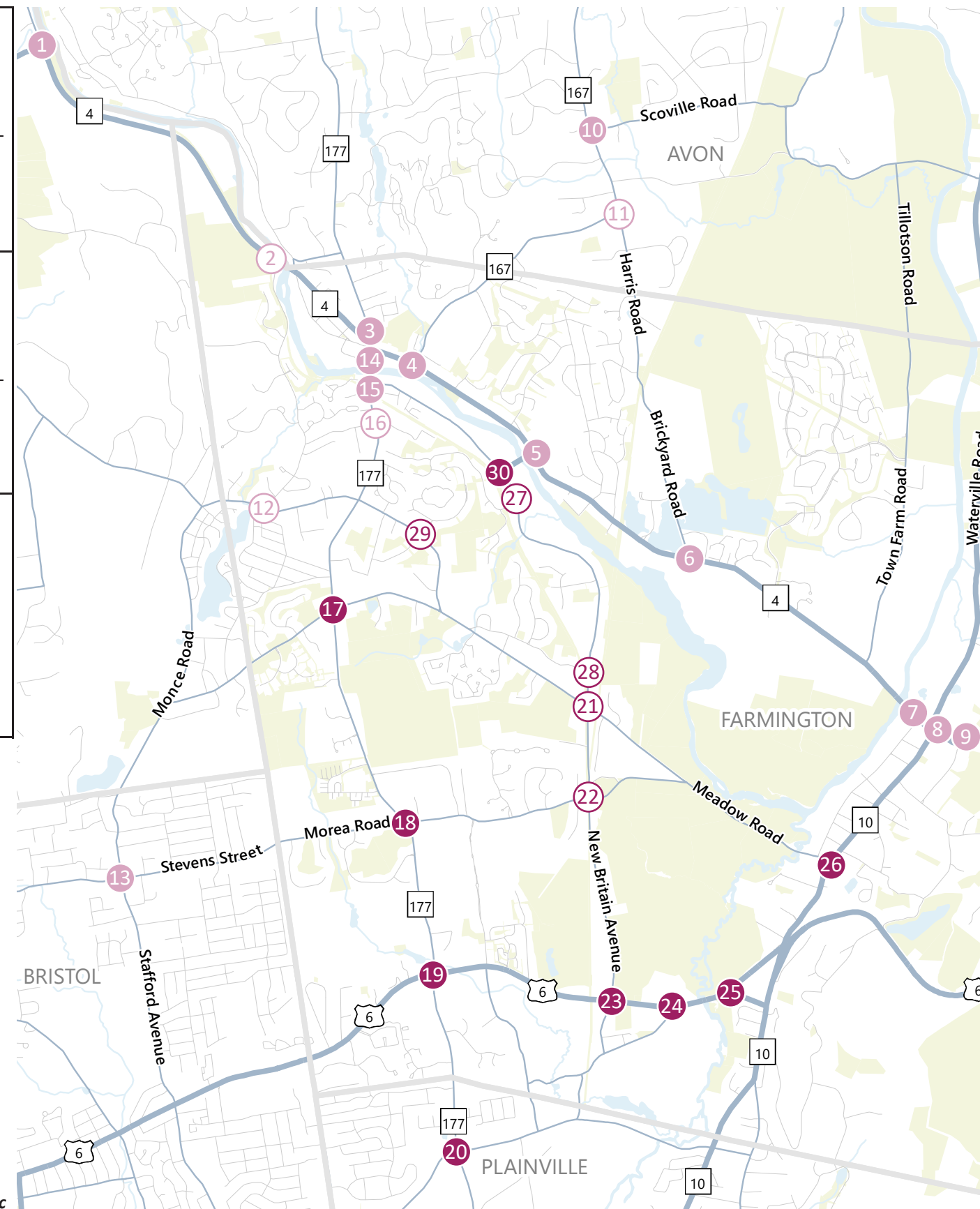
- Signalized Study Intersection
- Unsignalized Study Intersection
- ← X [Y] Weekday AM [PM] Peak Hour Vehicle Volume



<p><b>17</b></p> <p>42 [131] 561 [463] 40 [35]</p> <p>Plainville Ave (Rt 177)</p> <p>16 [46] 27 [124] 93 [67]</p> <p>Coppermine Rd</p> <p>95 [82] 99 [66] 72 [26]</p> <p>26 [93] 384 [676] 77 [102]</p>	<p><b>18</b></p> <p>14 [28] 797 [547] 82 [56]</p> <p>Morea Rd</p> <p>Plainville Ave (Rt 177)</p> <p>28 [91] 59 [213] 33 [64]</p> <p>Meadow Rd</p> <p>22 [19] 205 [103] 283 [167]</p> <p>124 [301] 440 [886] 59 [41]</p>	<p><b>19</b></p> <p>71 [134] 857 [551] 257 [175]</p> <p>Plainville Ave (Rt 177)</p> <p>73 [286] 289 [751] 107 [169]</p> <p>Scott Swamp Rd (Rt 6)</p> <p>97 [143] 726 [426] 172 [130]</p> <p>93 [139] 481 [823] 132 [98]</p>	<p><b>20</b></p> <p>62 [14] 823 [564] 114 [87]</p> <p>Unionville Ave (Rt 177)</p> <p>47 [151] 153 [247] 42 [268]</p> <p>Northwest Dr</p> <p>31 [27] 188 [107] 88 [99]</p> <p>226 [127] 521 [937] 172 [84]</p>
<p><b>21</b></p> <p>12 [9] 155 [149] 149 [200]</p> <p>New Britain Ave</p> <p>92 [157] 48 [209] 6 [22]</p> <p>Red Oak Hill Rd</p> <p>24 [14] 236 [139] 87 [51]</p> <p>20 [152] 124 [234] 6 [18]</p>	<p><b>22</b></p> <p>83 [69] 167 [138] 0 [2]</p> <p>New Britain Ave</p> <p>0 [9] 74 [125] 11 [6]</p> <p>Meadow Rd</p> <p>110 [116] 148 [100] 120 [74]</p> <p>51 [167] 136 [338] 4 [9]</p>	<p><b>23</b></p> <p>50 [41] 85 [142] 127 [114]</p> <p>New Britain Ave</p> <p>118 [317] 546 [1056] 10 [22]</p> <p>Scott Swamp Rd (Rt 6)</p> <p>47 [48] 828 [649] 38 [50]</p> <p>34 [32] 63 [124] 11 [12]</p>	<p><b>24</b></p> <p>1 [9] 1 [7] 2 [14]</p> <p>Hyde Rd</p> <p>19 [3] 599 [1226] 148 [176]</p> <p>Scott Swamp Rd (Rt 6)</p> <p>9 [2] 1092 [841] 7 [25]</p> <p>3 [13] 6 [0] 50 [253]</p>
<p><b>25</b></p> <p>709 [1077] 105 [171]</p> <p>Scott Swamp Rd (Rt 6)</p> <p>Colt Hwy (Rt 6)</p> <p>934 [778] 184 [330]</p> <p>183 [329] 16 [40]</p>	<p><b>26</b></p> <p>90 [215] 275 [559]</p> <p>Meadow Rd</p> <p>Main St (Rt 10)</p> <p>334 [152] 121 [156]</p> <p>87 [217] 385 [386]</p>	<p><b>27</b></p> <p>14 [47] 306 [218]</p> <p>New Britain Ave</p> <p>Oakridge</p> <p>31 [24] 55 [34]</p> <p>21 [45] 214 [540]</p>	<p><b>28</b></p> <p>13 [32] 298 [254]</p> <p>New Britain Ave</p> <p>Coppermine Rd</p> <p>20 [18] 49 [21]</p> <p>17 [47] 242 [432]</p>
<p><b>29</b></p> <p>21 [26] 1 [2] 25 [23]</p> <p>Chaffee Ln</p> <p>26 [19] 81 [155] 13 [10]</p> <p>W District Rd</p> <p>30 [23] 101 [62] 0 [3]</p> <p>2 [3] 0 [0] 19 [4]</p>	<p><b>30</b></p> <p>53 [215] 732 [413]</p> <p>Monteith Dr</p> <p>New Britain Ave</p> <p>508 [664] 11 [16]</p> <p>268 [0] 20 [0]</p>		

**LEGEND**

- Signalized Study Intersection
- Unsignalized Study Intersection
- ← x [y] Weekday AM [PM] Peak Hour Vehicle Volume



INTERSECTION/LANE GROUP	2050 SCENARIO 3 (ROUTE 177 BRIDGE AND MONTIETH BRIDGE OUT OF SERVICE CONDITIONS) LEVEL OF SERVICE	
	A.M. PEAK HOUR	P.M. PEAK HOUR
	LOS	LOS
<b>SIGNALIZED</b>		
<b>1: Canton Rd (RT 179) &amp; Spielman Hwy (RT 4)</b>		
Eastbound Left	D	D
Eastbound Right	A	A
Northbound Left/Through	C	F
Southbound Through/Right	B	C
<i>Overall</i>	<i>C</i>	<i>F</i>
<b>3: S Main St (RT 177)/Lovely St (RT 177) &amp; School St/Farmington Ave (RT 4) &amp; Main St (RT 4)</b>		
Eastbound Left/Through/Right	C	C
Westbound Left/Through	C	C
Westbound Right	B	B
Northbound Left	A	C
Northbound Through	A	A
Southbound Left	C	D
Southbound Through	C	A
Southeastbound Left	D	D
Southeastbound Right	C	C
<i>Overall</i>	<i>C</i>	<i>C</i>
<b>4: Farmington Ave (RT 4) &amp; W Avon Rd (RT 167)</b>		
Eastbound Left	A	A
Eastbound Through	B	A
Westbound Through/Right	C	C
Southbound Left/Right	C	C
<i>Overall</i>	<i>B</i>	<i>B</i>
<b>5: Farmington Ave (RT 4) &amp; Monteith Dr</b>		
Eastbound Left/Through	F	F
Westbound Through/Right	D	A
Southbound Left	F	D
Southbound Right	B	B
<i>Overall</i>	<i>F</i>	<i>E</i>
<b>6: Bridgewater Rd/Brickyard Rd &amp; Farmington Ave (RT 4)</b>		
Eastbound Left	B	C
Eastbound Through/Right	D	E
Westbound Left	B	D
Westbound Through	C	D
Westbound Right	A	B
Northbound Left	C	C
Northbound Through/Right	C	D
Southbound Left	F	D
Southbound Through/Right	C	C
<i>Overall</i>	<i>D</i>	<i>D</i>
<b>7: Garden St &amp; Farmington Ave (RT 4)</b>		
Eastbound Through/Right	C	B
Westbound Left	A	A
Westbound Through	B	B
Northbound Left/Right	E	F
<i>Overall</i>	<i>C</i>	<i>B</i>

INTERSECTION/LANE GROUP	2050 SCENARIO 3 (ROUTE 177 BRIDGE AND MONTIETH BRIDGE OUT OF SERVICE CONDITIONS) LEVEL OF SERVICE	
	A.M. PEAK HOUR	P.M. PEAK HOUR
	LOS	LOS
<b>8: Main St/Waterville Rd (RT 10) &amp; Farmington Ave (RT 4)</b>		
Eastbound Left	B	B
Eastbound Through	F	E
Eastbound Right	C	C
Westbound Left	D	D
Westbound Through/Right	F	F
Northbound Left	F	F
Northbound Through	E	F
Northbound Right	E	D
Southbound Left/Through/Right	D	E
<b>Overall</b>	<b>F</b>	<b>F</b>
<b>9: High St/Backage Rd &amp; Farmington Ave (RT 4)</b>		
Eastbound Left	A	A
Eastbound Through/Right	B	C
Westbound Left	A	A
Westbound Through/Right	A	B
Northbound Left/Through	E	E
Northbound Right	B	B
Southbound Left/Through/Right	E	E
<b>Overall</b>	<b>B</b>	<b>C</b>
<b>10: W Avon Rd (RT 167) &amp; Sycamore Hills Rd/Scoville Rd</b>		
Eastbound Left/Through/Right	C	C
Westbound Left/Through/Right	C	C
Northbound Left/Through/Right	C	C
Southbound Left/Through/Right	B	B
<b>Overall</b>	<b>C</b>	<b>C</b>
<b>13: Stafford Ave &amp; Stevens St</b>		
Eastbound Left/Through/Right	C	C
Westbound Left/Through/Right	C	C
Northbound Left/Through/Right	D	F
Southbound Left/Through/Right	D	C
<b>Overall</b>	<b>D</b>	<b>E</b>
<b>14: S Main St (RT 177) &amp; Mill St</b>		
Eastbound Left/Through	C	B
Eastbound Right	A	A
Westbound Left/Through	B	B
Westbound Right	C	B
Northbound Left	A	A
Northbound Through/Right	A	A
Southbound Left	B	A
Southbound Through/Right	A	A
<b>Overall</b>	<b>C</b>	<b>A</b>
<b>15: S Main St (RT 177) &amp; Railroad Ave/New Britain Ave</b>		
Eastbound Left/Through/Right	C	B
Westbound Left/Through	C	C
Westbound Right	A	A
Northbound Left	A	A
Northbound Through/Right	A	A
Southbound Left	A	A
Southbound Through/Right	A	A
<b>Overall</b>	<b>B</b>	<b>C</b>
<b>17: Plainville Ave (RT 177) &amp; Coopermine Rd</b>		
Eastbound Left/Through/Right	D	D
Westbound Left/Through/Right	D	D
Northbound Left/Through/Right	B	B
Southbound Left/Through/Right	B	A
<b>Overall</b>	<b>B</b>	<b>C</b>

INTERSECTION/LANE GROUP	2050 SCENARIO 3 (ROUTE 177 BRIDGE AND MONTIETH BRIDGE OUT OF SERVICE CONDITIONS) LEVEL OF SERVICE	
	A.M. PEAK HOUR	P.M. PEAK HOUR
	LOS	LOS
<b>18: Plainville Ave (RT 177) &amp; Morea Rd/Meadow Rd</b>		
Eastbound Left/Through/Right	F	D
Westbound Left/Through/Right	C	D
Northbound Left	B	B
Northbound Through/Right	C	C
Southbound Left	A	B
Southbound Through/Right	D	C
<i>Overall</i>	<i>D</i>	<i>C</i>
<b>19: Plainville Ave (RT 177) &amp; Scott Swamp Rd (US 6)</b>		
Eastbound Left	F	F
Eastbound Through	F	E
Eastbound Right	B	B
Westbound Left	F	F
Westbound Through/Right	C	E
Northbound Left	C	C
Northbound Through	E	F
Northbound Right	A	A
Southbound Left	F	F
Southbound Through/Right	D	D
<i>Overall</i>	<i>E</i>	<i>E</i>
<b>20: Unionville Ave (RT 177) &amp; Northwest Dr</b>		
Eastbound Left	B	C
Eastbound Through/Right	D	D
Westbound Left	B	C
Westbound Through/Right	C	D
Northbound Left	D	C
Northbound Through/Right	C	E
Southbound Left	B	C
Southbound Through/Right	C	D
<i>Overall</i>	<i>C</i>	<i>D</i>
<b>23: New Britain Ave &amp; Scott Swamp Rd (US 6)</b>		
Eastbound Left	D	D
Eastbound Through/Right	B	B
Westbound Left	C	D
Westbound Through	B	C
Westbound Right	A	A
Northbound Left	D	C
Northbound Through/Right	C	D
Southbound Left	C	C
Southbound Through/Right	D	D
<i>Overall</i>	<i>B</i>	<i>C</i>
<b>24: Hyde Rd &amp; Scott Swamp Rd (US 6)</b>		
Eastbound Left	D	D
Eastbound Through/Right	A	B
Westbound Left	D	D
Westbound Through/Right	A	A
Northbound Left/Through	C	C
Northbound Right	A	C
Southbound Left/Through	C	D
Southbound Right	A	A
<i>Overall</i>	<i>A</i>	<i>B</i>

INTERSECTION/LANE GROUP	2050 SCENARIO 3 (ROUTE 177 BRIDGE AND MONTIETH BRIDGE OUT OF SERVICE CONDITIONS) LEVEL OF SERVICE	
	A.M. PEAK HOUR	P.M. PEAK HOUR
	LOS	LOS
<b>25: Scott Swamp Rd (RT 552) &amp; Scott Swamp Rd (US 6)/Colt Hwy (US 6)</b>		
Eastbound Through	A	B
Eastbound Right	A	A
Westbound Left	D	E
Westbound Through	A	A
Northbound Left/Right	D	D
<b>Overall</b>	<b>B</b>	<b>B</b>
<b>26: Main St (RT 10) &amp; Meadow Rd</b>		
Eastbound Left/Right	D	D
Northbound Left/Through	F	F
Southbound Left/Right	D	F
<b>Overall</b>	<b>E</b>	<b>F</b>
<b>UNSIGNALIZED</b>		
<b>2: River Road &amp; Collinsville Rd (RT 4)</b>		
Northbound Left	A	F
Northbound Right	F	F
Westbound Left	D	B
<b>11: Harris Rd/W Avon Rd (RT 167) &amp; W Avon Rd (RT 167)</b>		
Eastbound Left/Right	C	B
Northbound Left/Through	B	C
Southbound Through/Right	C	E
<b>Overall</b>	<b>C</b>	<b>D</b>
<b>12: Burlington Rd &amp; River Rd</b>		
Eastbound Left	A	A
Southbound Left/Right	B	C
<b>16: S Main St (RT 177) &amp; Webster St</b>		
Northbound Left	A	A
Eastbound Left/Right	B	B
<b>21: New Britain Ave &amp; Red Oak Hill Rd</b>		
Eastbound Left/Through/Right	B	B
Westbound Left/Through/Right	A	C
Northbound Left/Through/Right	A	C
Southbound Left/Through/Right	B	C
<b>Overall</b>	<b>B</b>	<b>C</b>
<b>22: New Britain Ave &amp; Meadow Rd</b>		
Eastbound Left/Through/Right	B	B
Westbound Left/Through/Right	B	B
Northbound Left/Through/Right	B	D
Southbound Left/Through/Right	B	B
<b>Overall</b>	<b>B</b>	<b>C</b>
<b>27: New Britain Ave &amp; Oakridge</b>		
Northbound Left	A	A
Eastbound Left/Right	A	A
<b>28: New Britain Ave &amp; Coppermine Rd</b>		
Northbound Left	A	A
Eastbound Left/Right	A	B
<b>29: W District Rd &amp; Whispering Rod Rd/Chaffee Ln</b>		
Eastbound Left/Through/Right	A	A
Westbound Left/Through/Right	A	A
Northbound Left/Through/Right	A	A
Southbound Left/Through/Right	A	A
<b>Overall</b>	<b>A</b>	<b>A</b>

Notes: LOS calculations were performed using Synchro 11 .

INTERSECTION/LANE GROUP	2050 SCENARIO 4 (BUILD & ROUTE 177 BRIDGE OUT OF SERVICE CONDITIONS) LEVEL OF SERVICE	
	A.M. PEAK HOUR	P.M. PEAK HOUR
	LOS	LOS
<b>SIGNALIZED</b>		
<b>1: Canton Rd (RT 179) &amp; Spielman Hwy (RT 4)</b>		
Eastbound Left	D	D
Eastbound Right	A	A
Northbound Left/Through	C	F
Southbound Through/Right	B	C
<i>Overall</i>	C	F
<b>3: S Main St (RT 177)/Lovely St (RT 177) &amp; School St/Farmington Ave (RT 4) &amp; Main St (RT 4)</b>		
Eastbound Left/Through/Right	C	C
Westbound Left/Through	C	C
Westbound Right	B	B
Northbound Left	A	C
Northbound Through	A	A
Southbound Left	C	D
Southbound Through	C	A
Southeastbound Left	D	D
Southeastbound Right	C	C
<i>Overall</i>	C	C
<b>4: Farmington Ave (RT 4) &amp; W Avon Rd (RT 167)</b>		
Eastbound Left	B	A
Eastbound Through	B	B
Westbound Through/Right	C	C
Southbound Left/Right	D	E
<i>Overall</i>	C	C
<b>5: Farmington Ave (RT 4) &amp; Monteith Dr</b>		
Eastbound Left	C	A
Eastbound Through/Right	F	F
Westbound Left	E	C
Westbound Through	C	B
Westbound Right	C	A
Northbound Left	E	F
Northbound Through	D	C
Northbound Right	B	A
Southbound Left	C	C
Southbound Through/Right	D	D
<i>Overall</i>	E	F
<b>6: Bridgewater Rd/Brickyard Rd &amp; Farmington Ave (RT 4)</b>		
Eastbound Left	C	C
Eastbound Through/Right	F	F
Westbound Left	C	C
Westbound Through	F	F
Westbound Right	A	C
Northbound Left	C	C
Northbound Through/Right	C	E
Southbound Left	D	D
Southbound Through/Right	D	D
<i>Overall</i>	F	F
<b>7: Garden St &amp; Farmington Ave (RT 4)</b>		
Eastbound Through/Right	B	B
Westbound Left	A	A
Westbound Through	B	B
Northbound Left/Right	E	F
<i>Overall</i>	C	B

INTERSECTION/LANE GROUP	2050 SCENARIO 4 (BUILD & ROUTE 177 BRIDGE OUT OF SERVICE CONDITIONS) LEVEL OF SERVICE	
	A.M. PEAK HOUR	P.M. PEAK HOUR
	LOS	LOS
<b>8: Main St/Waterville Rd (RT 10) &amp; Farmington Ave (RT 4)</b>		
Eastbound Left	B	B
Eastbound Through	F	D
Eastbound Right	C	C
Westbound Left	C	D
Westbound Through/Right	F	F
Northbound Left	E	F
Northbound Through	E	E
Northbound Right	D	D
Southbound Left/Through/Right	D	E
<b>Overall</b>	<b>F</b>	<b>E</b>
<b>9: High St/Backage Rd &amp; Farmington Ave (RT 4)</b>		
Eastbound Left	A	A
Eastbound Through/Right	A	B
Westbound Left	A	A
Westbound Through/Right	A	B
Northbound Left/Through	E	E
Northbound Right	B	B
Southbound Left/Through/Right	E	E
<b>Overall</b>	<b>B</b>	<b>B</b>
<b>10: W Avon Rd (RT 167) &amp; Sycamore Hills Rd/Scoville Rd</b>		
Eastbound Left/Through/Right	C	C
Westbound Left/Through/Right	D	C
Northbound Left/Through/Right	C	C
Southbound Left/Through/Right	D	B
<b>Overall</b>	<b>C</b>	<b>C</b>
<b>13: Stafford Ave &amp; Stevens St</b>		
Eastbound Left/Through/Right	C	C
Westbound Left/Through/Right	C	C
Northbound Left/Through/Right	D	F
Southbound Left/Through/Right	D	C
<b>Overall</b>	<b>D</b>	<b>F</b>
<b>14: S Main St (RT 177) &amp; Mill St</b>		
Eastbound Left/Through	C	C
Eastbound Right	A	A
Westbound Left/Through	B	C
Westbound Right	C	C
Northbound Left	A	A
Northbound Through/Right	A	A
Southbound Left	B	A
Southbound Through/Right	A	A
<b>Overall</b>	<b>C</b>	<b>B</b>
<b>15: S Main St (RT 177) &amp; Railroad Ave/New Britain Ave</b>		
Eastbound Left/Through/Right	C	B
Westbound Left/Through	C	C
Westbound Right	A	A
Northbound Left	A	B
Northbound Through/Right	A	B
Southbound Left	A	A
Southbound Through/Right	A	A
<b>Overall</b>	<b>A</b>	<b>C</b>
<b>17: Plainville Ave (RT 177) &amp; Coopermine Rd</b>		
Eastbound Left/Through/Right	D	E
Westbound Left/Through/Right	D	D
Northbound Left/Through/Right	B	C
Southbound Left/Through/Right	B	B
<b>Overall</b>	<b>C</b>	<b>C</b>

INTERSECTION/LANE GROUP	2050 SCENARIO 4 (BUILD & ROUTE 177 BRIDGE OUT OF SERVICE CONDITIONS) LEVEL OF SERVICE	
	A.M. PEAK HOUR	P.M. PEAK HOUR
	LOS	LOS
<b>18: Plainville Ave (RT 177) &amp; Morea Rd/Meadow Rd</b>		
Eastbound Left/Through/Right	F	D
Westbound Left/Through/Right	D	E
Northbound Left	C	B
Northbound Through/Right	B	D
Southbound Left	A	B
Southbound Through/Right	D	C
<b>Overall</b>	<b>D</b>	<b>D</b>
<b>19: Plainville Ave (RT 177) &amp; Scott Swamp Rd (US 6)</b>		
Eastbound Left	F	F
Eastbound Through	F	E
Eastbound Right	B	B
Westbound Left	F	F
Westbound Through/Right	C	E
Northbound Left	C	C
Northbound Through	F	F
Northbound Right	A	A
Southbound Left	F	F
Southbound Through/Right	D	D
<b>Overall</b>	<b>F</b>	<b>F</b>
<b>20: Unionville Ave (RT 177) &amp; Northwest Dr</b>		
Eastbound Left	B	C
Eastbound Through/Right	D	D
Westbound Left	B	C
Westbound Through/Right	C	C
Northbound Left	D	C
Northbound Through/Right	C	E
Southbound Left	B	C
Southbound Through/Right	C	D
<b>Overall</b>	<b>C</b>	<b>D</b>
<b>23: New Britain Ave &amp; Scott Swamp Rd (US 6)</b>		
Eastbound Left	D	D
Eastbound Through/Right	B	B
Westbound Left	C	D
Westbound Through	B	C
Westbound Right	A	A
Northbound Left	D	C
Northbound Through/Right	D	D
Southbound Left	C	C
Southbound Through/Right	D	D
<b>Overall</b>	<b>B</b>	<b>C</b>
<b>24: Hyde Rd &amp; Scott Swamp Rd (US 6)</b>		
Eastbound Left	D	D
Eastbound Through/Right	A	A
Westbound Left	D	D
Westbound Through/Right	A	A
Northbound Left/Through	C	C
Northbound Right	A	B
Southbound Left/Through	C	D
Southbound Right	A	A
<b>Overall</b>	<b>A</b>	<b>A</b>
<b>25: Scott Swamp Rd (RT 552) &amp; Scott Swamp Rd (US 6)/Colt Hwy (US 6)</b>		
Eastbound Through	A	B
Eastbound Right	A	A
Westbound Left	D	E
Westbound Through	A	A
Northbound Left/Right	D	D
<b>Overall</b>	<b>B</b>	<b>B</b>

INTERSECTION/LANE GROUP	2050 SCENARIO 4 (BUILD & ROUTE 177 BRIDGE OUT OF SERVICE CONDITIONS) LEVEL OF SERVICE	
	A.M. PEAK HOUR	P.M. PEAK HOUR
	LOS	LOS
<b>26: Main St (RT 10) &amp; Meadow Rd</b>		
Eastbound Left/Right	C	D
Northbound Left/Through	E	F
Southbound Left/Right	D	E
<b>Overall</b>	<b>D</b>	<b>F</b>
<b>30: New Britain Ave &amp; Monteith Dr</b>		
Eastbound Left	B	A
Eastbound Through	A	A
Westbound Through	B	B
Westbound Right	A	A
Southbound Left	F	C
Southbound Right	A	A
<b>Overall</b>	<b>E</b>	<b>B</b>
<b>UNSIGNALIZED</b>		
<b>2: River Road &amp; Collinsville Rd (RT 4)</b>		
Northbound Left	F	F
Northbound Right	F	C
Westbound Left	C	B
<b>11: Harris Rd/W Avon Rd (RT 167) &amp; W Avon Rd (RT 167)</b>		
Eastbound Left/Right	D	C
Northbound Left/Through	C	C
Southbound Through/Right	E	F
<b>Overall</b>	<b>D</b>	<b>F</b>
<b>12: Burlington Rd &amp; River Rd</b>		
Eastbound Left	A	A
Southbound Left/Right	B	B
<b>16: S Main St (RT 177) &amp; Webster St</b>		
Northbound Left	A	A
Eastbound Left/Right	B	C
<b>21: New Britain Ave &amp; Red Oak Hill Rd</b>		
Eastbound Left/Through/Right	C	C
Westbound Left/Through/Right	B	F
Northbound Left/Through/Right	B	F
Southbound Left/Through/Right	C	E
<b>Overall</b>	<b>B</b>	<b>F</b>
<b>22: New Britain Ave &amp; Meadow Rd</b>		
Eastbound Left/Through/Right	C	C
Westbound Left/Through/Right	B	B
Northbound Left/Through/Right	B	F
Southbound Left/Through/Right	C	B
<b>Overall</b>	<b>C</b>	<b>D</b>
<b>27: New Britain Ave &amp; Oakridge</b>		
Northbound Left	A	A
Eastbound Left/Right	B	B
<b>28: New Britain Ave &amp; Coppermine Rd</b>		
Northbound Left	A	A
Eastbound Left/Right	B	B
<b>29: W District Rd &amp; Whispering Rod Rd/Chaffee Ln</b>		
Eastbound Left/Through/Right	A	A
Westbound Left/Through/Right	A	A
Northbound Left/Through/Right	A	A
Southbound Left/Through/Right	A	A
<b>Overall</b>	<b>A</b>	<b>A</b>

Notes: LOS calculations were performed using *Synchro 11*.

\*Scenario 4 LOS for Intersections 5 & 30 to be determined in the Alternatives Phase of the Study

INTERSECTION/LANE GROUP	AVAILABLE STORAGE LENGTH	2050 SCENARIO 3 (NO-BUILD & ROUTE 177 BRIDGE OUT OF SERVICE CONDITIONS) QUEUE LENGTH (FEET)			
		A.M. PEAK HOUR		P.M. PEAK HOUR	
		AVERAGE	95TH PERCENTILE	AVERAGE	95TH PERCENTILE
<b>SIGNALIZED</b>					
<b>1: Canton Rd (RT 179) &amp; Spielman Hwy (RT 4)</b>					
Eastbound Left	260'	156	246	179	279
Eastbound Right	-	14	76	0	55
Northbound Left/Through	-	86	#259	~903	#1201
Southbound Through/Right	-	178	337	279	#566
<b>3: S Main St (RT 177)/Lovely St (RT 177) &amp; School St/Farmington Ave (RT 4) &amp; Main St (RT 4)</b>					
Eastbound Left/Through/Right	-	19	64	25	73
Westbound Left/Through	-	13	55	16	62
Westbound Right	300'	54	175	131	483
Northbound Left	-	23	104	0	6
Northbound Through	-	1	11	22	80
Southbound Left	110'	151	422	0	0
Southbound Through	-	1	10	214	#586
Southeastbound Left	-	0	0	0	0
Southeastbound Right	255'	0	0	0	0
<b>4: Farmington Ave (RT 4) &amp; W Avon Rd (RT 167)</b>					
Eastbound Left	365'	14	88	24	51
Eastbound Through	-	93	475	141	259
Westbound Through/Right	-	118	442	260	504
Southbound Left/Right	-	37	146	90	218
<b>5: Farmington Ave (RT 4) &amp; Monteith Dr</b>					
Eastbound Left/Through	-	~1112	#1087	~847	#1082
Westbound Through/Right	-	554	516	165	307
Southbound Left	-	~616	#623	60	106
Southbound Right	-	102	119	0	45
<b>6: Bridgewater Rd/Brickyard Rd &amp; Farmington Ave (RT 4)</b>					
Eastbound Left	90'	14	54	26	94
Eastbound Through/Right	-	428.0	#1031	558	#1213
Westbound Left	90'	14	57	14	54
Westbound Through	-	358	#907	428	#1053
Westbound Right	90'	0	36	35	152
Northbound Left	-	9	25	32	64
Northbound Through/Right	-	1	34	27	81
Southbound Left	150'	~292	#448	~205	#306
Southbound Through/Right	-	16	68	17	76

INTERSECTION/LANE GROUP	AVAILABLE STORAGE LENGTH	2050 SCENARIO 3 (NO-BUILD & ROUTE 177 BRIDGE OUT OF SERVICE CONDITIONS) QUEUE LENGTH (FEET)			
		A.M. PEAK HOUR		P.M. PEAK HOUR	
		AVERAGE	95TH PERCENTILE	AVERAGE	95TH PERCENTILE
<b>7: Garden St &amp; Farmington Ave (RT 4)</b>					
Eastbound Through/Right	-	297	636	247	669
Westbound Left	200'	2	m2	1	m1
Westbound Through	-	74	m98	119	m126
Northbound Left/Right	-	216	305	138	208
<b>8: Main St/Waterville Rd (RT 10) &amp; Farmington Ave (RT 4)</b>					
Eastbound Left	100'	6	m6	1	m1
Eastbound Through	-	~741	#874	~616	#741
Eastbound Right	150'	124	m124	239	297
Westbound Left	255'	35	m39	58	m97
Westbound Through/Right	-	~1073	#1439	~990	#1342
Northbound Left	100'	113	185	213	#406
Norhtbound Through	-	170	#301	141	231
Northbound Right	50'	109	175	64	120
Southbound Left/Through/Right	-	366	499	365	#717
<b>9: High St/Backage Rd &amp; Farmington Ave (RT 4)</b>					
Eastbound Left	85'	1	m1	2	m1
Eastbound Through/Right	-	245	m147	517	m151
Westbound Left	115'	2	14	5	32
Westbound Through/Right	-	195	797	212	#1030
Northbound Left/Through	-	37	67	82	134
Norhtbound Right	85'	0	71	0	32
Southbound Left/Through/Right	-	6	23	12	35
<b>10: W Avon Rd (RT 167) &amp; Sycamore Hills Rd/Scoville Rd</b>					
Eastbound Left/Through/Right	-	2	18	5	39
Westbound Left/Through/Right	-	33	130	30	140
Northbound Left/Through/Right	-	144	415	147	461
Southbound Left/Through/Right	-	91	#430	89	459
<b>13: Stafford Ave &amp; Stevens St</b>					
Eastbound Left/Through/Right	-	173	295	118	194
Westbound Left/Through/Right	-	91	178	200	#321
Northbound Left/Through/Right	-	127	200	~336	#520
Southbound Left/Through/Right	-	145	219	111	183

INTERSECTION/LANE GROUP	AVAILABLE STORAGE LENGTH	2050 SCENARIO 3 (NO-BUILD & ROUTE 177 BRIDGE OUT OF SERVICE CONDITIONS) QUEUE LENGTH (FEET)			
		A.M. PEAK HOUR		P.M. PEAK HOUR	
		AVERAGE	95TH PERCENTILE	AVERAGE	95TH PERCENTILE
<b>14: S Main St (RT 177) &amp; Mill St</b>					
Eastbound Left/Through	-	37	129	7	24
Eastbound Right	95'	2	14	10	30
Westbound Left/Through	-	11	49	12	35
Westbound Right	100'	0	3	12	30
Northbound Left	60'	0	0	0	0
Northbound Through/Right	-	0	0	0	0
Southbound Left	-	0	0	0	0
Southbound Through/Right	-	0	0	0	0
<b>15: S Main St (RT 177) &amp; Railroad Ave/New Britain Ave</b>					
Eastbound Left/Through/Right	-	11	51	11	50
Westbound Left/Through	-	9	45	28	102
Westbound Right	200'	1	17	2	20
Northbound Left	80'	6	50	3	27
Northbound Through/Right	-	0	0	0	0
Southbound Left	120'	0	0	0	0
Southbound Through/Right	-	0	0	0	0
<b>17: Plainville Ave (RT 177) &amp; Coopermine Rd</b>					
Eastbound Left/Through/Right	-	109	181	72	134
Westbound Left/Through/Right	-	64	120	122	203
Northbound Left/Through/Right	-	132	260	267	557
Southbound Left/Through/Right	-	198	385	134	270
<b>18: Plainville Ave (RT 177) &amp; Morea Rd/Meadow Rd</b>					
Eastbound Left/Through/Right	-	~395	#710	170	282
Westbound Left/Through/Right	-	39	94	221	#394
Northbound Left	250'	27	47	82	122
Northbound Through/Right	-	234	339	505	#790
Southbound Left	80'	20	37	14	28
Southbound Through/Right	-	442	646	302	439
<b>19: Plainville Ave (RT 177) &amp; Scott Swamp Rd (US 6)</b>					
Eastbound Left	260'	63	#170	108	221
Eastbound Through	-	~732	#1325	361	#773
Eastbound Right	260'	39	128	6	67
Westbound Left	180'	103	#295	147	#340
Westbound Through/Right	-	111	212	438	#904
Northbound Left	250'	42	110	59	153
Northbound Through	-	357	#780	~753	#1425
Northbound Right	250'	16	52	16	43
Southbound Left	165'	152	#463	93	#365
Southbound Through/Right	-	336	#707	210	418

INTERSECTION/LANE GROUP	AVAILABLE STORAGE LENGTH	2050 SCENARIO 3 (NO-BUILD & ROUTE 177 BRIDGE OUT OF SERVICE CONDITIONS) QUEUE LENGTH (FEET)			
		A.M. PEAK HOUR		P.M. PEAK HOUR	
		AVERAGE	95TH PERCENTILE	AVERAGE	95TH PERCENTILE
<b>20: Unionville Ave (RT 177) &amp; Northwest Dr</b>					
Eastbound Left	-	12	30	9	40
Eastbound Through/Right	-	133	#257	96	#328
Westbound Left	-	12	30	87	243
Westbound Through/Right	-	92	162	190	#532
Northbound Left	210'	70	#223	47	147
Northbound Through/Right	-	157	231	~321	#761
Southbound Left	260'	31	61	26	92
Southbound Through/Right	-	225	#332	154	#404
<b>23: New Britain Ave &amp; Scott Swamp Rd (US 6)</b>					
Eastbound Left	340'	14	38	17	43
Eastbound Through/Right	-	148	294	111	246
Westbound Left	100'	6	22	15	m25
Westbound Through	-	62	201	267	#446
Westbound Right	320'	0	41	31	164
Northbound Left	190'	16	39	13	36
Northbound Through/Right	-	17	45	61	114
Southbound Left	120'	37	58	25	45
Southbound Through/Right	-	51	95	52	99
<b>24: Hyde Rd &amp; Scott Swamp Rd (US 6)</b>					
Eastbound Left	130'	5	m12	1	m3
Eastbound Through/Right	-	16	39	220	302
Westbound Left	360'	90	#164	84	m145
Westbound Through/Right	-	0	122	67	180
Northbound Left/Through	-	5	20	6	23
Northbound Right	-	5	29	76	139
Southbound Left/Through	-	1	9	12	36
Southbound Right	-	0	0	0	0
<b>25: Scott Swamp Rd (RT 552) &amp; Scott Swamp Rd (US 6)/Colt Hwy (US 6)</b>					
Eastbound Through	-	247	61	167	249
Eastbound Right	350'	58	18	12	19
Westbound Left	350'	60	105	94	#202
Westbound Through	-	50	64	119	168
Northbound Left/Right	-	53	81	96	140
<b>26: Main St (RT 10) &amp; Meadow Rd</b>					
Eastbound Left/Right	-	199	#614	129	293
Northbound Left/Through	-	~249	#774	~516	#1105
Southbound Left/Right	-	189	#461	~441	#1115

INTERSECTION/LANE GROUP	AVAILABLE STORAGE LENGTH	2050 SCENARIO 3 (NO-BUILD & ROUTE 177 BRIDGE OUT OF SERVICE CONDITIONS) QUEUE LENGTH (FEET)			
		A.M. PEAK HOUR		P.M. PEAK HOUR	
		AVERAGE	95TH PERCENTILE	AVERAGE	95TH PERCENTILE
<b>UNSIGNALIZED</b>					
<b>2: River Road &amp; Collinsville Rd (RT 4)</b>					
Northbound Left	-		0		345
Northbound Right	60'		745		358
Westbound Left	-		215		63
<b>11: Harris Rd/W Avon Rd (RT 167) &amp; W Avon Rd (RT 167)</b>					
Eastbound Left/Right	-		108		48
Northbound Left/Through	-		40		120
Southbound Through/Right	-		143		295
<b>12: Burlington Rd &amp; River Rd</b>					
Eastbound Left	-		8		13
Southbound Left/Right	-		30		50
<b>16: S Main St (RT 177) &amp; Webster St</b>					
Northbound Left	-		13		17.5
Eastbound Left/Right	-		45		38
<b>21: New Britain Ave &amp; Red Oak Hill Rd</b>					
Eastbound Left/Through/Right	-		75		50
Westbound Left/Through/Right	-		18		145
Northbound Left/Through/Right	-		8		93
Southbound Left/Through/Right	-		45		57.5
<b>22: New Britain Ave &amp; Meadow Rd</b>					
Eastbound Left/Through/Right	-		83		55
Westbound Left/Through/Right	-		18		25
Northbound Left/Through/Right	-		20		195
Southbound Left/Through/Right	-		45		23

Notes: LOS calculations were performed using *Synchro 11* .

INTERSECTION/LANE GROUP	AVAILABLE STORAGE LENGTH	2050 SCENARIO 4 (BUILD & ROUTE 177 BRIDGE OUT OF SERVICE CONDITIONS) QUEUE LENGTH (FEET)			
		A.M. PEAK HOUR		P.M. PEAK HOUR	
		AVERAGE	95TH PERCENTILE	AVERAGE	95TH PERCENTILE
<b>SIGNALIZED</b>					
<b>1: Canton Rd (RT 179) &amp; Spielman Hwy (RT 4)</b>					
Eastbound Left	260'	145	232	154	243
Eastbound Right	-	16	78	0	53
Northbound Left/Through	-	80	#239	~859	#1195
Southbound Through/Right	-	173	338	250	#546
<b>3: S Main St (RT 177)/Lovely St (RT 177) &amp; School St/Farmington Ave (RT 4) &amp; Main St (RT 4)</b>					
Eastbound Left/Through/Right	-	20	70	30	79
Westbound Left/Through	-	11	54	15	55
Westbound Right	300'	51	165	99	371
Northbound Left	-	21	104	0	6
Northbound Through	-	1	11	27	103
Southbound Left	110'	126	363	0	0
Southbound Through	-	1	8	165	#605
Southeastbound Left	-	0	0	0	0
Southeastbound Right	255'	0	0	0	0
<b>4: Farmington Ave (RT 4) &amp; W Avon Rd (RT 167)</b>					
Eastbound Left	365'	12	72	18	34
Eastbound Through	-	135	626	256	365
Westbound Through/Right	-	225	#851	382	604
Southbound Left/Right	-	74	189	214	#400
<b>5: Farmington Ave (RT 4) &amp; Monteith Dr</b>					
Eastbound Left	200'	117	#152	25	33
Eastbound Through/Right	-	~733	#714	~866	#1175
Westbound Left	250'	133	#327	107	192
Westbound Through	-	263	289	258	399
Westbound Right	100'	143	171	0	0
Northbound Left	250'	138	#287	~347	#594
Northbound Through	-	113	187	39	85
Northbound Right	75'	17	100	0	72
Southbound Left	-	57	77	5	18
Southbound Through/Right	-	143	230	21	55
<b>6: Bridgewater Rd/Brickyard Rd &amp; Farmington Ave (RT 4)</b>					
Eastbound Left	90'	34	67	45	104
Eastbound Through/Right	-	~741	#1046	~743	#1220
Westbound Left	90'	30	61	25	62
Westbound Through	-	~645	#878	~788	#1027
Westbound Right	90'	11	69	100	197
Northbound Left	-	11	38	40	87
Northbound Through/Right	-	2	40	66	133
Southbound Left	150'	278	#587	219	#395
Southbound Through/Right	-	55	125	46	119

INTERSECTION/LANE GROUP	AVAILABLE STORAGE LENGTH	2050 SCENARIO 4 (BUILD & ROUTE 177 BRIDGE OUT OF SERVICE CONDITIONS) QUEUE LENGTH (FEET)			
		A.M. PEAK HOUR		P.M. PEAK HOUR	
		AVERAGE	95TH PERCENTILE	AVERAGE	95TH PERCENTILE
<b>7: Garden St &amp; Farmington Ave (RT 4)</b>					
Eastbound Through/Right	-	233	556	203	559
Westbound Left	200'	1	m2	1	m1
Westbound Through	-	59	m80	39	m179
Northbound Left/Right	-	188	268	128	196
<b>8: Main St/Waterville Rd (RT 10) &amp; Farmington Ave (RT 4)</b>					
Eastbound Left	100'	6	m4	0	m1
Eastbound Through	-	~657	#857	481	#725
Eastbound Right	150'	89	m88	168	220
Westbound Left	255'	31	m38	49	m96
Westbound Through/Right	-	~976	#1401	~828	#1302
Northbound Left	100'	87	144	168	#289
Norhtbound Through	-	131	201	126	201
Northbound Right	50'	106	165	61	110
Southbound Left/Through/Right	-	358	482	344	#648
<b>9: High St/Backage Rd &amp; Farmington Ave (RT 4)</b>					
Eastbound Left	85'	0	m1	2	m1
Eastbound Through/Right	-	149	m194	396	m225
Westbound Left	115'	2	14	5	34
Westbound Through/Right	-	189	798	194	#995
Northbound Left/Through	-	31	60	72	120
Norhtbound Right	85'	0	68	0	38
Southbound Left/Through/Right	-	6	23	11	33
<b>10: W Avon Rd (RT 167) &amp; Sycamore Hills Rd/Scoville Rd</b>					
Eastbound Left/Through/Right	-	3	16	6	39
Westbound Left/Through/Right	-	68	153	38	146
Northbound Left/Through/Right	-	274	#786	183	#595
Southbound Left/Through/Right	-	146	#875	134	#799
<b>13: Stafford Ave &amp; Stevens St</b>					
Eastbound Left/Through/Right	-	183	#322	116	191
Westbound Left/Through/Right	-	100	197	188	293
Northbound Left/Through/Right	-	121	189	~341	#525
Southbound Left/Through/Right	-	139	210	131	213

INTERSECTION/LANE GROUP	AVAILABLE STORAGE LENGTH	2050 SCENARIO 4 (BUILD & ROUTE 177 BRIDGE OUT OF SERVICE CONDITIONS) QUEUE LENGTH (FEET)			
		A.M. PEAK HOUR		P.M. PEAK HOUR	
		AVERAGE	95TH PERCENTILE	AVERAGE	95TH PERCENTILE
<b>14: S Main St (RT 177) &amp; Mill St</b>					
Eastbound Left/Through	-	31	111	11	32
Eastbound Right	95'	2	14	20	49
Westbound Left/Through	-	9	44	15	42
Westbound Right	100'	0	5	9	22
Northbound Left	60'	0	0	0	0
Northbound Through/Right	-	0	0	0	0
Southbound Left	-	0	0	0	0
Southbound Through/Right	-	0	0	0	0
<b>15: S Main St (RT 177) &amp; Railroad Ave/New Britain Ave</b>					
Eastbound Left/Through/Right	-	12	52	12	49
Westbound Left/Through	-	13	58	52	167
Westbound Right	200'	1	18	2	23
Northbound Left	80'	12	94	6	46
Northbound Through/Right	-	0	0	0	0
Southbound Left	120'	0	0	0	0
Southbound Through/Right	-	0	0	0	0
<b>17: Plainville Ave (RT 177) &amp; Coopermine Rd</b>					
Eastbound Left/Through/Right	-	163	251	93	168
Westbound Left/Through/Right	-	80	141	127	210
Northbound Left/Through/Right	-	156	305	329	#760
Southbound Left/Through/Right	-	245	473	165	336
<b>18: Plainville Ave (RT 177) &amp; Morea Rd/Meadow Rd</b>					
Eastbound Left/Through/Right	-	~455	#717	188	290
Westbound Left/Through/Right	-	67	136	256	#452
Northbound Left	250'	31	83	85	127
Northbound Through/Right	-	223	324	608	#930
Southbound Left	80'	20	37	13	28
Southbound Through/Right	-	517	#836	311	456
<b>19: Plainville Ave (RT 177) &amp; Scott Swamp Rd (US 6)</b>					
Eastbound Left	260'	79	#221	119	240
Eastbound Through	-	~747	#1343	333	#721
Eastbound Right	260'	42	134	8	71
Westbound Left	180'	88	#250	139	#308
Westbound Through/Right	-	110	210	446	#910
Northbound Left	250'	42	110	66	165
Northbound Through	-	387	#845	~881	#1584
Northbound Right	250'	17	51	14	39
Southbound Left	165'	159	#478	96	#368
Southbound Through/Right	-	361	#765	242	467

INTERSECTION/LANE GROUP	AVAILABLE STORAGE LENGTH	2050 SCENARIO 4 (BUILD & ROUTE 177 BRIDGE OUT OF SERVICE CONDITIONS) QUEUE LENGTH (FEET)			
		A.M. PEAK HOUR		P.M. PEAK HOUR	
		AVERAGE	95TH PERCENTILE	AVERAGE	95TH PERCENTILE
<b>20: Unionville Ave (RT 177) &amp; Northwest Dr</b>					
Eastbound Left	-	11	28	8	37
Eastbound Through/Right	-	137	#267	88	#290
Westbound Left	-	15	35	96	263
Westbound Through/Right	-	94	164	155	#525
Northbound Left	210'	66	#214	37	135
Northbound Through/Right	-	161	236	~294	#799
Southbound Left	260'	30	59	25	98
Southbound Through/Right	-	237	#353	141	#408
<b>23: New Britain Ave &amp; Scott Swamp Rd (US 6)</b>					
Eastbound Left	340'	26	#61	25	57
Eastbound Through/Right	-	157	283	120	237
Westbound Left	100'	6	22	12	m22
Westbound Through	-	92	191	297	#480
Westbound Right	320'	0	57	38	158
Northbound Left	190'	19	46	15	40
Northbound Through/Right	-	37	77	67	122
Southbound Left	120'	35	56	27	51
Southbound Through/Right	-	61	108	86	#168
<b>24: Hyde Rd &amp; Scott Swamp Rd (US 6)</b>					
Eastbound Left	130'	6	m15	1	m3
Eastbound Through/Right	-	22	50	201	213
Westbound Left	360'	85	#144	83	m142
Westbound Through/Right	-	0	115	65	185
Northbound Left/Through	-	5	20	7	24
Northbound Right	-	5	27	70	132
Southbound Left/Through	-	1	9	11	33
Southbound Right	-	0	0	0	0
<b>25: Scott Swamp Rd (RT 552) &amp; Scott Swamp Rd (US 6)/Colt Hwy (US 6)</b>					
Eastbound Through	-	221	54	161	242
Eastbound Right	350'	67	17	14	19
Westbound Left	350'	59	104	89	#189
Westbound Through	-	52	64	107	150
Northbound Left/Right	-	58	88	98	142
<b>26: Main St (RT 10) &amp; Meadow Rd</b>					
Eastbound Left/Right	-	182	#606	134	303
Northbound Left/Through	-	~169	#646	~443	#980
Southbound Left/Right	-	166	#395	~357	#1021

INTERSECTION/LANE GROUP	AVAILABLE STORAGE LENGTH	2050 SCENARIO 4 (BUILD & ROUTE 177 BRIDGE OUT OF SERVICE CONDITIONS) QUEUE LENGTH (FEET)			
		A.M. PEAK HOUR		P.M. PEAK HOUR	
		AVERAGE	95TH PERCENTILE	AVERAGE	95TH PERCENTILE
<b>UNSIGNALIZED</b>					
<b>2: River Road &amp; Collinsville Rd (RT 4)</b>					
Northbound Left	-		165		348
Northbound Right	60'		250		108
Westbound Left	-		85		35
<b>11: Harris Rd/W Avon Rd (RT 167) &amp; W Avon Rd (RT 167)</b>					
Eastbound Left/Right	-		230		73
Northbound Left/Through	-		65		170
Southbound Through/Right	-		263		615
<b>12: Burlington Rd &amp; River Rd</b>					
Eastbound Left	-		8		13
Southbound Left/Right	-		25		40
<b>16: S Main St (RT 177) &amp; Webster St</b>					
Northbound Left	-		8		15
Eastbound Left/Right	-		35		35
<b>21: New Britain Ave &amp; Red Oak Hill Rd</b>					
Eastbound Left/Through/Right	-		98		83
Westbound Left/Through/Right	-		28		283
Northbound Left/Through/Right	-		30		325
Southbound Left/Through/Right	-		88		258
<b>22: New Britain Ave &amp; Meadow Rd</b>					
Eastbound Left/Through/Right	-		175		100
Westbound Left/Through/Right	-		18		33
Northbound Left/Through/Right	-		53		323
Southbound Left/Through/Right	-		78		55

Notes: LOS calculations were performed using *Synchro 11* .

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 1: Canton Rd (RT 179) & Spielman Hwy (RT 4) AM PEAK



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	320	438	222	219	339	221
Future Volume (vph)	320	438	222	219	339	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98				
Frt		0.850			0.947	
Flt Protected	0.950			0.975		
Satd. Flow (prot)	1770	1583	0	1816	1764	0
Flt Permitted	0.950			0.410		
Satd. Flow (perm)	1770	1547	0	764	1764	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		411			51	
Link Speed (mph)	35			50	50	
Link Distance (ft)	986			565	665	
Travel Time (s)	19.2			7.7	9.1	
Confl. Peds. (#/hr)		1				
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	333	456	231	228	353	230
Shared Lane Traffic (%)						
Lane Group Flow (vph)	333	456	0	459	583	0
Number of Detectors	1	1	1	1	1	
Detector Template			Left			
Leading Detector (ft)	40	40	20	40	40	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	40	40	20	40	40	
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	pm+ov	D.P+P	NA	NA	
Protected Phases	4	1	1	12	2	
Permitted Phases		4	2			
Detector Phase	4	1	1	2	2	
Switch Phase						
Minimum Initial (s)	6.0	6.0	6.0		20.0	
Minimum Split (s)	17.0	10.0	10.0		26.6	
Total Split (s)	29.0	10.0	10.0		46.6	
Total Split (%)	33.9%	11.7%	11.7%		54.4%	
Maximum Green (s)	25.0	6.0	6.0		40.0	
Yellow Time (s)	3.0	3.0	3.0		5.0	
All-Red Time (s)	1.0	1.0	1.0		1.6	
Lost Time Adjust (s)	0.0	0.0			0.0	
Total Lost Time (s)	4.0	4.0			6.6	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 1: Canton Rd (RT 179) & Spielman Hwy (RT 4) AM PEAK

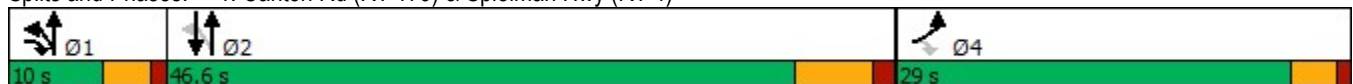


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	1.0	3.0	3.0		5.0	
Recall Mode	None	Min	Min		Min	
Walk Time (s)	12.0					
Flash Dont Walk (s)	1.0					
Pedestrian Calls (#/hr)	1					
Act Effct Green (s)	17.8	23.8		48.8	40.1	
Actuated g/C Ratio	0.23	0.30		0.62	0.51	
v/c Ratio	0.83	0.60		0.83	0.63	
Control Delay	47.0	6.6		25.7	17.4	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	47.0	6.6		25.7	17.4	
LOS	D	A		C	B	
Approach Delay	23.7			25.7	17.4	
Approach LOS	C			C	B	
Queue Length 50th (ft)	156	14		86	178	
Queue Length 95th (ft)	246	76		#259	337	
Internal Link Dist (ft)	906			485	585	
Turn Bay Length (ft)	260					
Base Capacity (vph)	565	757		554	925	
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	0.59	0.60		0.83	0.63	

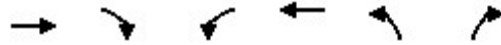
**Intersection Summary**

Area Type: Other  
 Cycle Length: 85.6  
 Actuated Cycle Length: 78.6  
 Natural Cycle: 65  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.83  
 Intersection Signal Delay: 22.2 Intersection LOS: C  
 Intersection Capacity Utilization 85.0% 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: 1: Canton Rd (RT 179) & Spielman Hwy (RT 4)**



Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 2: River Rd & Collinsville Rd (RT 4) AM PEAK



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	649	102	705	421	47	595
Future Volume (vph)	649	102	705	421	47	595
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	60
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.982					0.850
Flt Protected				0.970	0.950	
Satd. Flow (prot)	1811	0	0	1789	1752	1568
Flt Permitted				0.970	0.950	
Satd. Flow (perm)	1811	0	0	1789	1752	1568
Link Speed (mph)	30			30	25	
Link Distance (ft)	740			816	860	
Travel Time (s)	16.8			18.5	23.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	669	105	727	434	48	613
Shared Lane Traffic (%)						
Lane Group Flow (vph)	774	0	0	1161	48	613
Sign Control	Free			Free	Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	114.9%
ICU Level of Service	H
Analysis Period (min)	15

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 2: River Rd & Collinsville Rd (RT 4) AM PEAK

Intersection						
Int Delay, s/veh	8.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	649	102	705	421	47	595
Future Vol, veh/h	649	102	705	421	47	595
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	60
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	669	105	727	434	48	613

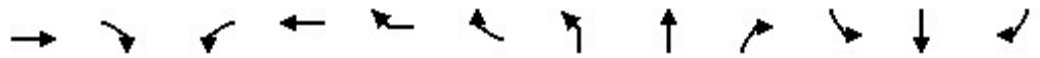
Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	774	0	2610 722
Stage 1	-	-	-	-	722 -
Stage 2	-	-	-	-	1888 -
Critical Hdwy	-	-	4.13	-	6.43 6.23
Critical Hdwy Stg 1	-	-	-	-	5.43 -
Critical Hdwy Stg 2	-	-	-	-	5.43 -
Follow-up Hdwy	-	-	2.227	-	3.527 3.327
Pot Cap-1 Maneuver	-	-	837	-	~ 27 ~ 425
Stage 1	-	-	-	-	479 -
Stage 2	-	-	-	-	130 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	837	-	0 ~ 425
Mov Cap-2 Maneuver	-	-	-	-	0 -
Stage 1	-	-	-	-	479 -
Stage 2	-	-	-	-	0 -

Approach	EB	WB	NB
HCM Control Delay, s	0	18.9	
HCM LOS			-

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	425	-	-	837	-
HCM Lane V/C Ratio	-	1.443	-	-	0.868	-
HCM Control Delay (s)	-	237.5	-	-	30.3	0
HCM Lane LOS	-	F	-	-	D	A
HCM 95th %tile Q(veh)	-	31	-	-	11	-

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

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



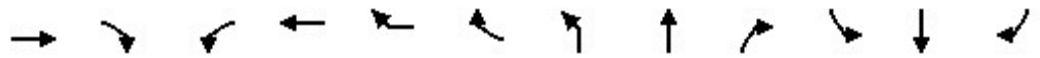
Lane Group	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑			↑	↑		↑	↑	↑	↑	↑	↑
Traffic Volume (vph)	106	2	1	37	247	46	0	0	0	73	1	2
Future Volume (vph)	106	2	1	37	247	46	0	0	0	73	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		50	0		0		0		145	110		60
Storage Lanes		1	0		1		1		1	1		1
Taper Length (ft)			25				25			50		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor	1.00			1.00								0.98
Frt	0.997				0.850							0.900
Flt Protected				0.999						0.950		
Satd. Flow (prot)	3528	0	0	1861	1583	0	1863	1863	1863	1770	1567	0
Flt Permitted				0.993						0.757		
Satd. Flow (perm)	3528	0	0	1850	1583	0	1863	1863	1863	1410	1567	0
Right Turn on Red		No				No			Yes			
Satd. Flow (RTOR)												
Link Speed (mph)	25			30				25				35
Link Distance (ft)	761			292				461				785
Travel Time (s)	20.8			6.6				12.6				15.3
Confl. Peds. (#/hr)		3	3				1					1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	113	2	1	39	263	49	0	0	0	78	1	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	115	0	0	40	312	0	0	0	0	78	3	0
Number of Detectors	1		1	1	1		1	0	0	1	1	
Detector Template			Left									
Leading Detector (ft)	44		20	44	44		44	0	0	44	206	
Trailing Detector (ft)	-6		0	-6	-6		-6	0	0	-6	200	
Detector 1 Position(ft)	-6		0	-6	-6		-6	0	0	-6	200	
Detector 1 Size(ft)	50		20	50	50		50	6	20	50	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	NA		Perm	NA	pt+ov		D.P+P		Free	Perm	NA	
Protected Phases	4			4	4 5		1	1 2				2
Permitted Phases			4				2		Free	2		
Detector Phase	4		4	4	4		1	2		2	2	
Switch Phase												
Minimum Initial (s)	9.0		9.0	9.0			5.0			15.0	15.0	
Minimum Split (s)	14.0		14.0	14.0			9.0			21.0	21.0	
Total Split (s)	27.0		27.0	27.0			9.0			22.0	22.0	
Total Split (%)	21.8%		21.8%	21.8%			7.3%			17.7%	17.7%	
Maximum Green (s)	22.0		22.0	22.0			5.0			16.0	16.0	
Yellow Time (s)	4.0		4.0	4.0			3.0			4.0	4.0	
All-Red Time (s)	1.0		1.0	1.0			1.0			2.0	2.0	
Lost Time Adjust (s)	0.0			0.0			0.0			0.0	0.0	
Total Lost Time (s)	5.0			5.0			4.0			6.0	6.0	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



Lane Group	SBR2	SEL2	SEL	SER	SER2	Ø3
Lane Configurations						
Traffic Volume (vph)	3	6	426	1	3	
Future Volume (vph)	3	6	426	1	3	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	
Storage Length (ft)			0	255		
Storage Lanes			1	1		
Taper Length (ft)			25			
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	
Ped Bike Factor						
Frt	0.850			0.850		
Flt Protected			0.950			
Satd. Flow (prot)	1504	0	1770	1583	0	
Flt Permitted			0.995			
Satd. Flow (perm)	1504	0	1853	1583	0	
Right Turn on Red	Yes				No	
Satd. Flow (RTOR)	185					
Link Speed (mph)			30			
Link Distance (ft)			820			
Travel Time (s)			18.6			
Confl. Peds. (#/hr)				3	1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	3	6	453	1	3	
Shared Lane Traffic (%)	10%					
Lane Group Flow (vph)	3	0	459	4	0	
Number of Detectors	0	1	1	1		
Detector Template		Left				
Leading Detector (ft)	0	20	44	44		
Trailing Detector (ft)	0	0	-6	-6		
Detector 1 Position(ft)	0	0	-6	-6		
Detector 1 Size(ft)	20	20	50	50		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		
Turn Type	Free	D.Pm	Prot	Prot		
Protected Phases			5	5	3	
Permitted Phases	Free	5				
Detector Phase		5	5	5		
Switch Phase						
Minimum Initial (s)		9.0	9.0	9.0	1.0	
Minimum Split (s)		14.0	14.0	14.0	23.0	
Total Split (s)		43.0	43.0	43.0	23.0	
Total Split (%)		34.7%	34.7%	34.7%	19%	
Maximum Green (s)		38.0	38.0	38.0	19.0	
Yellow Time (s)		4.0	4.0	4.0	4.0	
All-Red Time (s)		1.0	1.0	1.0	0.0	
Lost Time Adjust (s)			0.0	0.0		
Total Lost Time (s)			5.0	5.0		

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)

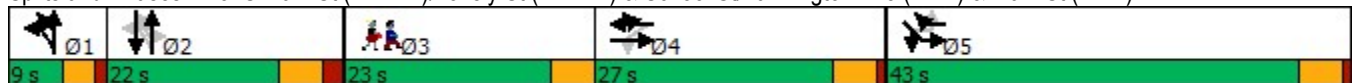


Lane Group	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lag		Lag	Lag				Lead			Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes				Yes			Yes	Yes
Vehicle Extension (s)	1.5		1.5	1.5				1.5			2.5	2.5
Recall Mode	None		None	None				None			Min	Min
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	12.3			12.3	39.4					16.2	16.2	
Actuated g/C Ratio	0.18			0.18	0.56					0.23	0.23	
v/c Ratio	0.19			0.12	0.35					0.24	0.01	
Control Delay	28.8			29.8	10.2					31.9	32.0	
Queue Delay	0.0			0.0	0.0					0.0	0.0	
Total Delay	28.8			29.8	10.2					31.9	32.0	
LOS	C			C	B					C	C	
Approach Delay	28.8			12.5								30.7
Approach LOS	C			B								C
Queue Length 50th (ft)	19			13	54					23	1	
Queue Length 95th (ft)	64			55	175					104	11	
Internal Link Dist (ft)	681			212				381				705
Turn Bay Length (ft)										110		
Base Capacity (vph)	1191			624	887					346	384	
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	0.10			0.06	0.35					0.23	0.01	

Intersection Summary

Area Type:	Other
Cycle Length:	124
Actuated Cycle Length:	70.2
Natural Cycle:	85
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.81
Intersection Signal Delay:	26.3
Intersection LOS:	C
Intersection Capacity Utilization:	57.3%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)

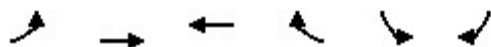


Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



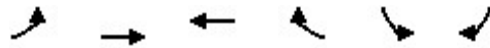
Lane Group	SBR2	SEL2	SEL	SER	SER2	Ø3
Lead/Lag						Lead
Lead-Lag Optimize?						Yes
Vehicle Extension (s)		1.5	1.5	1.5		3.0
Recall Mode		None	None	None		None
Walk Time (s)						7.0
Flash Dont Walk (s)						12.0
Pedestrian Calls (#/hr)						4
Act Effct Green (s)	70.2		21.6	21.6		
Actuated g/C Ratio	1.00		0.31	0.31		
v/c Ratio	0.00		0.81	0.01		
Control Delay	0.0		35.5	20.2		
Queue Delay	0.0		0.0	0.0		
Total Delay	0.0		35.5	20.2		
LOS	A		D	C		
Approach Delay			35.3			
Approach LOS			D			
Queue Length 50th (ft)	0		151	1		
Queue Length 95th (ft)	0		422	10		
Internal Link Dist (ft)			740			
Turn Bay Length (ft)	60			255		
Base Capacity (vph)	1504		1080	923		
Starvation Cap Reductn	0		0	0		
Spillback Cap Reductn	0		0	0		
Storage Cap Reductn	0		0	0		
Reduced v/c Ratio	0.00		0.42	0.00		
<b>Intersection Summary</b>						

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 4: Farmington Ave (RT 4) & W Avon Rd (RT 167) AM PEAK



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3
Lane Configurations							
Traffic Volume (vph)	154	679	454	55	70	109	
Future Volume (vph)	154	679	454	55	70	109	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	365			0	0	0	
Storage Lanes	1			0	1	0	
Taper Length (ft)	50				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor					1.00		
Frt			0.985		0.918		
Flt Protected	0.950				0.981		
Satd. Flow (prot)	1770	1863	1835	0	1678	0	
Flt Permitted	0.296				0.981		
Satd. Flow (perm)	551	1863	1835	0	1673	0	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			6		62		
Link Speed (mph)		30	35		30		
Link Distance (ft)		1079	965		1192		
Travel Time (s)		24.5	18.8		27.1		
Confl. Peds. (#/hr)					3		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	
Adj. Flow (vph)	159	700	468	57	72	112	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	159	700	525	0	184	0	
Number of Detectors	1	2	2		1		
Detector Template							
Leading Detector (ft)	24	246	246		24		
Trailing Detector (ft)	-6	120	120		-6		
Detector 1 Position(ft)	-6	120	120		-6		
Detector 1 Size(ft)	30	6	6		30		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		
Detector 2 Position(ft)		240	240				
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.P+P	NA	NA		Prot		
Protected Phases	1	1 2	2		4	3	
Permitted Phases	2						
Detector Phase	1	2	2		4		
Switch Phase							
Minimum Initial (s)	5.0		15.0		7.0	1.0	
Minimum Split (s)	9.5		22.5		22.5	23.0	
Total Split (s)	19.0		44.5		28.0	23.0	
Total Split (%)	16.6%		38.9%		24.5%	20%	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 4: Farmington Ave (RT 4) & W Avon Rd (RT 167) AM PEAK

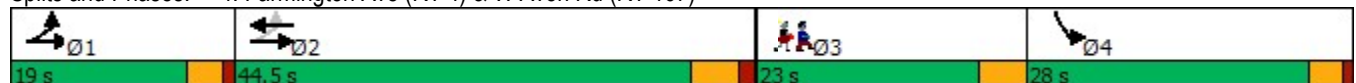


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3
Maximum Green (s)	15.0		39.0		24.0		19.0
Yellow Time (s)	3.0		4.0		3.0		4.0
All-Red Time (s)	1.0		1.5		1.0		0.0
Lost Time Adjust (s)	0.0		0.0		0.0		
Total Lost Time (s)	4.0		5.5		4.0		
Lead/Lag	Lead		Lag		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	1.5		2.5		2.0		3.0
Recall Mode	None		Min		None		None
Walk Time (s)							7.0
Flash Dont Walk (s)							11.0
Pedestrian Calls (#/hr)							9
Act Effct Green (s)	36.2	40.6	27.3		11.0		
Actuated g/C Ratio	0.57	0.64	0.43		0.17		
v/c Ratio	0.35	0.58	0.66		0.53		
Control Delay	8.9	11.2	21.3		26.0		
Queue Delay	0.0	0.0	0.0		0.0		
Total Delay	8.9	11.2	21.3		26.0		
LOS	A	B	C		C		
Approach Delay		10.8	21.3		26.0		
Approach LOS		B	C		C		
Queue Length 50th (ft)	14	93	118		37		
Queue Length 95th (ft)	88	475	442		146		
Internal Link Dist (ft)		999	885		1112		
Turn Bay Length (ft)	365						
Base Capacity (vph)	674	1571	1263		745		
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	0.24	0.45	0.42		0.25		

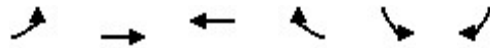
**Intersection Summary**

Area Type: Other  
 Cycle Length: 114.5  
 Actuated Cycle Length: 63.2  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.66  
 Intersection Signal Delay: 16.1 Intersection LOS: B  
 Intersection Capacity Utilization 57.6% ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 4: Farmington Ave (RT 4) & W Avon Rd (RT 167)

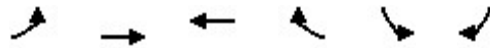


Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 5: Farmington Ave (RT 4) & Monteith Dr AM PEAK



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø2	Ø3
Lane Configurations								
Traffic Volume (vph)	205	481	395	341	558	465		
Future Volume (vph)	205	481	395	341	558	465		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Ped Bike Factor		1.00	0.99					
Frt			0.937			0.850		
Flt Protected		0.985			0.950			
Satd. Flow (prot)	0	1835	1727	0	1770	1583		
Flt Permitted		0.102			0.950			
Satd. Flow (perm)	0	190	1727	0	1770	1583		
Right Turn on Red				Yes		Yes		
Satd. Flow (RTOR)			58			440		
Link Speed (mph)		35	35		25			
Link Distance (ft)		784	925		548			
Travel Time (s)		15.3	18.0		14.9			
Confl. Peds. (#/hr)	3			3				
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74		
Adj. Flow (vph)	277	650	534	461	754	628		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	927	995	0	754	628		
Number of Detectors	1	0	1		3	3		
Detector Template	Left							
Leading Detector (ft)	20	0	356		24	24		
Trailing Detector (ft)	0	0	350		-6	-6		
Detector 1 Position(ft)	0	0	350		-6	-6		
Detector 1 Size(ft)	20	6	6		6	6		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)					6	6		
Detector 2 Size(ft)					6	6		
Detector 2 Type					Cl+Ex	Cl+Ex		
Detector 2 Channel								
Detector 2 Extend (s)					0.0	0.0		
Detector 3 Position(ft)					18	18		
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	D.P+P	NA	NA		Prot	Perm		
Protected Phases	1	1 2 3	2 3		4		2	3
Permitted Phases	2 3					4		
Detector Phase	1	2	2		4	4		
Switch Phase								
Minimum Initial (s)	5.0				7.0	7.0	15.0	1.0
Minimum Split (s)	9.0				16.0	16.0	20.4	7.5

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 5: Farmington Ave (RT 4) & Monteith Dr AM PEAK



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø2	Ø3
Total Split (s)	19.0				29.0	29.0	44.0	8.0
Total Split (%)	19.0%				29.0%	29.0%	44%	8%
Maximum Green (s)	15.0				25.0	25.0	38.6	1.5
Yellow Time (s)	3.0				3.0	3.0	4.4	4.4
All-Red Time (s)	1.0				1.0	1.0	1.0	2.1
Lost Time Adjust (s)					0.0	0.0		
Total Lost Time (s)					4.0	4.0		
Lead/Lag	Lead				Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes				Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0				1.5	1.5	3.0	3.0
Recall Mode	None				None	None	C-Max	None
Walk Time (s)					11.0	11.0		
Flash Dont Walk (s)					1.0	1.0		
Pedestrian Calls (#/hr)					3	3		
Act Effct Green (s)		59.0	57.6		33.0	33.0		
Actuated g/C Ratio		0.59	0.58		0.33	0.33		
v/c Ratio		8.28	0.98		1.29	0.77		
Control Delay		3299.4	43.8		174.1	15.9		
Queue Delay		0.0	0.0		0.0	0.0		
Total Delay		3299.4	43.8		174.1	15.9		
LOS		F	D		F	B		
Approach Delay		3299.4	43.8		102.2			
Approach LOS		F	D		F			
Queue Length 50th (ft)		~1112	554		~616	102		
Queue Length 95th (ft)		#1087	516		#623	119		
Internal Link Dist (ft)		704	845		468			
Turn Bay Length (ft)								
Base Capacity (vph)		112	1019		584	817		
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		8.28	0.98		1.29	0.77		

**Intersection Summary**

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 16 (16%), Referenced to phase 2:EBWB, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 8.28

Intersection Signal Delay: 981.7      Intersection LOS: F

Intersection Capacity Utilization 120.5%      ICU Level of Service H

Analysis Period (min) 15

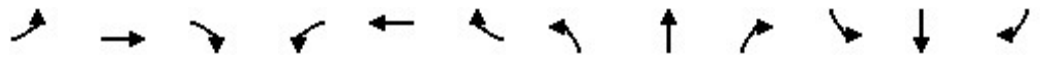
~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.

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

Splits and Phases: 5: Farmington Ave (RT 4) & Monteith Dr



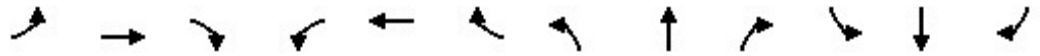
Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4) AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	673	15	53	619	161	17	2	36	416	24	71
Future Volume (vph)	50	673	15	53	619	161	17	2	36	416	24	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90		0	90		90	0		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	65			110			25			50		
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								0.97		1.00		
Frt		0.997				0.850		0.857				0.887
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1719	1804	0	1719	1810	1538	1719	1502	0	1719	1605	0
Flt Permitted	0.161			0.096			0.690			0.730		
Satd. Flow (perm)	291	1804	0	174	1810	1538	1249	1502	0	1316	1605	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				175		40				78
Link Speed (mph)		40			40			30				35
Link Distance (ft)		635			779			428				768
Travel Time (s)		10.8			13.3			9.7				15.0
Confl. Peds. (#/hr)									2	2		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	55	740	16	58	680	177	19	2	40	457	26	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	55	756	0	58	680	177	19	42	0	457	104	0
Number of Detectors	1	2		1	2	0	1	1		1	1	
Detector Template												
Leading Detector (ft)	45	342		45	342	0	55	50		50	60	
Trailing Detector (ft)	-5	190		-5	190	0	-5	-10		-10	-10	
Detector 1 Position(ft)	-5	190		-5	190	0	-5	-10		-10	-10	
Detector 1 Size(ft)	50	6		50	6	20	60	60		60	70	
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)		336			336							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	8		7	8	
Permitted Phases	6			2		2	8			8		
Detector Phase	1	6		5	2	2	7	8		7	8	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	5.0	7.0		5.0	7.0	
Minimum Split (s)	10.4	22.0		10.4	22.0	22.0	10.9	14.0		10.9	14.0	
Total Split (s)	15.0	48.0		15.0	48.0	48.0	27.0	16.0		27.0	16.0	

Lane Group	Ø9
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)	
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	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	5.0
Total Split (s)	14.0

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4) AM PEAK










Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	12.5%	40.0%		12.5%	40.0%	40.0%	22.5%	13.3%		22.5%	13.3%	
Maximum Green (s)	9.6	41.0		9.6	41.0	41.0	21.1	9.0		21.1	9.0	
Yellow Time (s)	4.4	5.0		4.4	5.0	5.0	3.0	4.1		3.0	4.1	
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	2.9	2.9		2.9	2.9	
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)	5.4	7.0		5.4	7.0	7.0	5.9	7.0		5.9	7.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	65.6	58.6		65.8	58.7	58.7	30.0	7.8		30.0	7.8	
Actuated g/C Ratio	0.55	0.49		0.55	0.49	0.49	0.25	0.06		0.25	0.06	
v/c Ratio	0.23	0.86		0.32	0.77	0.21	0.05	0.31		1.15	0.59	
Control Delay	15.1	40.1		17.6	34.3	4.3	29.9	23.5		127.7	32.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	15.1	40.1		17.6	34.3	4.3	29.9	23.5		127.7	32.2	
LOS	B	D		B	C	A	C	C		F	C	
Approach Delay		38.4			27.5			25.5			110.0	
Approach LOS		D			C			C			F	
Queue Length 50th (ft)	16	484		17	405	1	11	2		~348	20	
Queue Length 95th (ft)	46	#958		48	#819	49	29	38		#518	77	
Internal Link Dist (ft)		555			699			348			688	
Turn Bay Length (ft)	90			90		90				150		
Base Capacity (vph)	278	881		222	885	841	394	149		399	192	
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	0.20	0.86		0.26	0.77	0.21	0.05	0.28		1.15	0.54	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 45 (38%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.15  
 Intersection Signal Delay: 50.9 Intersection LOS: D  
 Intersection Capacity Utilization 85.4% 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.

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4) AM PEAK

Splits and Phases: 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)

 Ø1	 Ø2 (R)	 Ø7	 Ø8	 Ø9
15 s	48 s	27 s	16 s	14 s
 Ø5	 Ø6 (R)			
15 s	48 s			

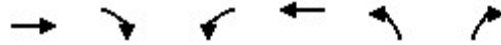
Lane Group	Ø9
Total Split (%)	12%
Maximum Green (s)	10.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	16.0
Pedestrian Calls (#/hr)	2
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 7: Garden St & Farmington Ave (RT 4) AM PEAK



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø4
Lane Configurations	↑↑		↵	↑	↵↵			
Traffic Volume (vph)	1219	120	16	773	198	46		
Future Volume (vph)	1219	120	16	773	198	46		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)		0	200		0	0		
Storage Lanes		0	1		1	0		
Taper Length (ft)			50		25			
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00		
Ped Bike Factor	1.00		1.00		0.98			
Frt	0.987				0.975			
Flt Protected			0.950		0.961			
Satd. Flow (prot)	3486	0	1770	1863	1745	0		
Flt Permitted			0.125		0.961			
Satd. Flow (perm)	3486	0	233	1863	1704	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)	11				6			
Link Speed (mph)	30			30	30			
Link Distance (ft)	1042			566	488			
Travel Time (s)	23.7			12.9	11.1			
Confl. Peds. (#/hr)		5	5		8			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Adj. Flow (vph)	1283	126	17	814	208	48		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	1409	0	17	814	256	0		
Number of Detectors	0		0	0	3			
Detector Template								
Leading Detector (ft)	0		0	0	24			
Trailing Detector (ft)	0		0	0	-6			
Detector 1 Position(ft)	0		0	0	-6			
Detector 1 Size(ft)	6		20	6	6			
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel								
Detector 1 Extend (s)	0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0		0.0	0.0	0.0			
Detector 2 Position(ft)					6			
Detector 2 Size(ft)					6			
Detector 2 Type					Cl+Ex			
Detector 2 Channel								
Detector 2 Extend (s)					0.0			
Detector 3 Position(ft)					18			
Detector 3 Size(ft)					6			
Detector 3 Type					Cl+Ex			
Detector 3 Channel								
Detector 3 Extend (s)					0.0			
Turn Type	NA		Perm	NA	Prot			
Protected Phases	2 4			2	5		3	4
Permitted Phases			2					
Detector Phase	2		2	2	5			

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 7: Garden St & Farmington Ave (RT 4) AM PEAK



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø4
<b>Switch Phase</b>								
Minimum Initial (s)			15.0	15.0	7.0		7.0	6.0
Minimum Split (s)			22.1	22.1	13.3		24.0	10.8
Total Split (s)			82.0	82.0	27.0		24.0	17.0
Total Split (%)			54.7%	54.7%	18.0%		16%	11%
Maximum Green (s)			74.9	74.9	20.7		20.0	12.2
Yellow Time (s)			4.6	4.6	4.5		4.0	3.8
All-Red Time (s)			2.5	2.5	1.8		0.0	1.0
Lost Time Adjust (s)			0.0	0.0	0.0			
Total Lost Time (s)			7.1	7.1	6.3			
<b>Lead/Lag</b>							Lead	Lag
Lead-Lag Optimize?							Yes	Yes
Vehicle Extension (s)			3.0	3.0	1.5		3.0	1.5
Recall Mode			C-Max	C-Max	None		None	None
Walk Time (s)							7.0	
Flash Dont Walk (s)							13.0	
Pedestrian Calls (#/hr)							13	
Act Effct Green (s)	96.5		96.5	96.5	30.5			
Actuated g/C Ratio	0.64		0.64	0.64	0.20			
v/c Ratio	0.63		0.11	0.68	0.71			
Control Delay	19.8		4.5	9.2	66.1			
Queue Delay	2.3		0.0	2.6	0.0			
Total Delay	22.1		4.5	11.8	66.1			
LOS	C		A	B	E			
Approach Delay	22.1			11.6	66.1			
Approach LOS	C			B	E			
Queue Length 50th (ft)	320		1	63	232			
Queue Length 95th (ft)	647		m2	m94	327			
Internal Link Dist (ft)	962			486	408			
Turn Bay Length (ft)			200					
Base Capacity (vph)	2245		149	1198	359			
Starvation Cap Reductn	0		0	260	0			
Spillback Cap Reductn	670		0	0	0			
Storage Cap Reductn	0		0	0	0			
Reduced v/c Ratio	0.89		0.11	0.87	0.71			

**Intersection Summary**

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 30 (20%), Referenced to phase 2:EBWB, Start of Yellow

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

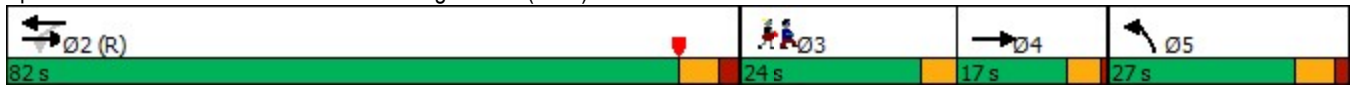
Intersection Signal Delay: 23.1 Intersection LOS: C

Intersection Capacity Utilization 65.6% ICU Level of Service C

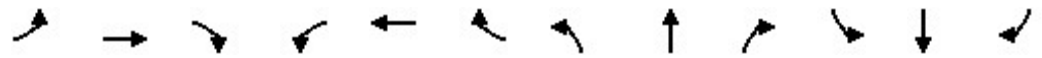
Analysis Period (min) 15

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

Splits and Phases: 7: Garden St & Farmington Ave (RT 4)



Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4) AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	1167	157	56	588	244	119	173	127	250	154	24
Future Volume (vph)	13	1167	157	56	588	244	119	173	127	250	154	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	255		0	100		50	0		0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (ft)	65			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.956				0.850		0.992	
Flt Protected	0.950			0.950			0.950				0.972	
Satd. Flow (prot)	1770	3539	1583	1770	1781	0	1770	1863	1583	0	1796	0
Flt Permitted	0.079			0.072			0.950				0.972	
Satd. Flow (perm)	147	3539	1583	134	1781	0	1770	1863	1583	0	1796	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		566			848			677			693	
Travel Time (s)		12.9			19.3			15.4			15.8	
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)	14	1268	171	61	639	265	129	188	138	272	167	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	1268	171	61	904	0	129	188	138	0	465	0
Number of Detectors	3	3	4	1	1		3	3	2	1	2	
Detector Template										Left		
Leading Detector (ft)	30	30	36	34	34		30	30	48	20	48	
Trailing Detector (ft)	0	0	-6	0	0		0	0	0	0	-6	
Detector 1 Position(ft)	0	0	-6	0	0		0	0	0	0	-6	
Detector 1 Size(ft)	6	6	6	34	34		6	6	12	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	12	12	6				12	12	18		6	
Detector 2 Size(ft)	6	6	6				6	6	30		42	
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0	0.0				0.0	0.0	0.0		0.0	
Detector 3 Position(ft)	24	24	18				24	24				
Detector 3 Size(ft)	6	6	6				6	6				
Detector 3 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex				
Detector 3 Channel												
Detector 3 Extend (s)	0.0	0.0	0.0				0.0	0.0				
Detector 4 Position(ft)			30									
Detector 4 Size(ft)			6									
Detector 4 Type			Cl+Ex									
Detector 4 Channel												
Detector 4 Extend (s)			0.0									
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Split	NA	pt+ov	Split	NA	

Lane Group	Ø3
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)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Detector 4 Position(ft)	
Detector 4 Size(ft)	
Detector 4 Type	
Detector 4 Channel	
Detector 4 Extend (s)	
Turn Type	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4) AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	1	6		5	2		7	7	5 7	4	4	
Permitted Phases	6		6	2								
Detector Phase	1	6	6	5	2		7	7	7	4	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	7.0	20.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	9.5	27.3	27.3	12.0	27.3		13.0	13.0		22.5	22.5	
Total Split (s)	15.0	54.0	54.0	15.0	54.0		23.0	23.0		34.0	34.0	
Total Split (%)	10.0%	36.0%	36.0%	10.0%	36.0%		15.3%	15.3%		22.7%	22.7%	
Maximum Green (s)	11.0	46.7	46.7	10.0	46.7		17.0	17.0		28.3	28.3	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	2.8	2.8	2.0	2.8		3.0	3.0		2.7	2.7	
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	7.3	7.3	5.0	7.3		6.0	6.0				5.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag					Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None		None	None	
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										5.0	5.0	
Pedestrian Calls (#/hr)										0	0	
Act Effct Green (s)	59.3	51.8	51.8	64.2	58.4		16.5	16.5	27.9			52.3
Actuated g/C Ratio	0.40	0.35	0.35	0.43	0.39		0.11	0.11	0.19			0.35
v/c Ratio	0.12	1.04	0.31	0.43	1.30		0.66	0.92	0.47			0.74
Control Delay	16.3	69.4	25.3	35.3	181.3		80.9	109.4	58.8			51.5
Queue Delay	0.0	14.4	0.0	0.0	0.0		0.0	0.0	0.0			0.0
Total Delay	16.3	83.9	25.3	35.3	181.3		80.9	109.4	58.8			51.5
LOS	B	F	C	D	F		F	F	E			D
Approach Delay		76.3			172.1			86.0				51.5
Approach LOS		E			F			F				D
Queue Length 50th (ft)	6	~730	127	36	~1099		123	184	120			400
Queue Length 95th (ft)	m5	#886	m114	m40	#1467		198	#330	187			539
Internal Link Dist (ft)		486			768			597				613
Turn Bay Length (ft)	100		150	255			100		50			
Base Capacity (vph)	181	1222	546	166	693		200	211	299			626
Starvation Cap Reductn	0	43	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	0.08	1.08	0.31	0.37	1.30		0.65	0.89	0.46			0.74

Intersection Summary

Area Type:	Other
Cycle Length:	150
Actuated Cycle Length:	150
Offset:	20 (13%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow
Natural Cycle:	150
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.30
Intersection Signal Delay:	101.9
Intersection Capacity Utilization:	94.9%
Intersection LOS:	F
ICU Level of Service:	F

Lane Group	Ø3
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	25.0
Total Split (s)	24.0
Total Split (%)	16%
Maximum Green (s)	20.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	13.0
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	
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	
<b>Intersection Summary</b>	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4) AM PEAK

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: 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4)

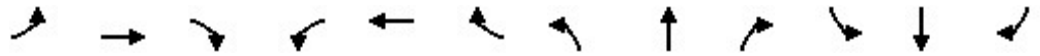
 Ø1	 Ø2 (R)	 Ø3	 Ø4	 Ø7
15 s	54 s	24 s	34 s	23 s
 Ø5	 Ø6 (R)			
15 s	54 s			

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 9: High St/Backage Rd & Farmington Ave (RT 4) AM PEAK

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	1476	36	28	883	8	36	1	190	4	0	3
Future Volume (vph)	10	1476	36	28	883	8	36	1	190	4	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	85		100	115		0	0		85	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	70			115			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.999				0.850		0.942	
Flt Protected	0.950			0.950				0.953			0.972	
Satd. Flow (prot)	1752	3491	0	1752	1843	0	0	1758	1568	0	1689	0
Flt Permitted	0.220			0.111								
Satd. Flow (perm)	406	3491	0	205	1843	0	0	1845	1568	0	1738	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		2							211			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		848			473			291			375	
Travel Time (s)		19.3			10.8			6.6			8.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	11	1640	40	31	981	9	40	1	211	4	0	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	1680	0	31	990	0	0	41	211	0	7	0
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template							Left			Left		
Leading Detector (ft)	40	40		25	25		20	35	35	20	30	
Trailing Detector (ft)	0	0		-10	-10		0	0	0	0	0	
Detector 1 Position(ft)	0	0		-10	-10		0	0	0	0	0	
Detector 1 Size(ft)	40	40		35	35		20	35	35	20	30	
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	pm+pt	NA		pm+pt	NA		D.P+P	NA	Prot	Perm	NA	
Protected Phases	1	6		5	2		4	4 7	4 7		7	
Permitted Phases	6			2			7			7		
Detector Phase	1	6		5	2		4	4	4	7	7	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		7.0			7.0	7.0	
Minimum Split (s)	9.0	21.7		9.0	21.7		11.7			12.0	12.0	
Total Split (s)	13.0	83.0		13.0	83.0		14.0			16.0	16.0	
Total Split (%)	8.7%	55.3%		8.7%	55.3%		9.3%			10.7%	10.7%	
Maximum Green (s)	9.0	76.3		9.0	76.3		9.3			11.0	11.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0			3.0	3.0	
All-Red Time (s)	1.0	2.2		1.0	2.2		1.7			2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	
Total Lost Time (s)	4.0	6.7		4.0	6.7						5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lag					

Lane Group	Ø3
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)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	24.0
Total Split (s)	24.0
Total Split (%)	16%
Maximum Green (s)	20.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 9: High St/Backage Rd & Farmington Ave (RT 4) AM PEAK

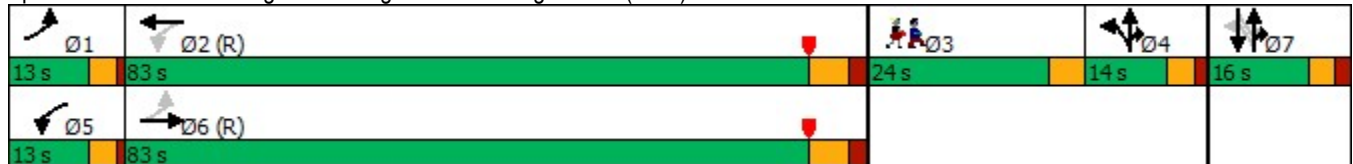


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes					
Vehicle Extension (s)	1.5	2.0		1.5	2.0		2.0			2.0	2.0	
Recall Mode	None	C-Min		None	C-Min		None			None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	127.5	121.8		128.5	123.7			11.3	11.3			7.0
Actuated g/C Ratio	0.85	0.81		0.86	0.82			0.08	0.08			0.05
v/c Ratio	0.03	0.59		0.14	0.65			0.29	0.67			0.09
Control Delay	2.0	10.8		3.5	9.7			68.1	18.2			71.0
Queue Delay	0.0	0.2		0.0	0.0			0.0	0.0			0.0
Total Delay	2.0	11.0		3.5	9.7			68.1	18.2			71.0
LOS	A	B		A	A			E	B			E
Approach Delay		10.9			9.5			26.3				71.0
Approach LOS		B			A			C				E
Queue Length 50th (ft)	2	399		2	198			40	0			7
Queue Length 95th (ft)	m1	m163		14	792			72	74			24
Internal Link Dist (ft)		768			393			211				295
Turn Bay Length (ft)	85			115					85			
Base Capacity (vph)	432	2834		270	1519			154	324			127
Starvation Cap Reductn	0	341		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	0.03	0.67		0.11	0.65			0.27	0.65			0.06

**Intersection Summary**

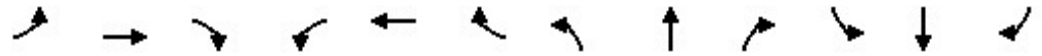
Area Type: Other  
 Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 45 (30%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 130  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.67  
 Intersection Signal Delay: 11.9 Intersection LOS: B  
 Intersection Capacity Utilization 73.2% ICU Level of Service D  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

**Splits and Phases: 9: High St/Backage Rd & Farmington Ave (RT 4)**



Lane Group	Ø3
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	13.0
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	
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	
<b>Intersection Summary</b>	

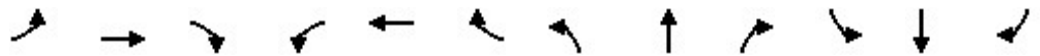
Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	6	1	0	62	3	63	2	384	70	101	446	3
Future Volume (vph)	6	1	0	62	3	63	2	384	70	101	446	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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00			1.00			1.00	
Frt					0.934			0.979			0.999	
Flt Protected		0.958			0.976						0.991	
Satd. Flow (prot)	0	1701	0	0	1619	0	0	1738	0	0	1758	0
Flt Permitted		0.770			0.842			0.998			0.806	
Satd. Flow (perm)	0	1367	0	0	1395	0	0	1735	0	0	1430	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					38			9				
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		360			802			2590			707	
Travel Time (s)		8.2			18.2			44.1			12.1	
Confl. Peds. (#/hr)			1	1			1					1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Adj. Flow (vph)	7	1	0	73	4	74	2	452	82	119	525	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	8	0	0	151	0	0	536	0	0	648	0
Number of Detectors	1	1		1	1		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	22		20	22		20	206		20	206	
Trailing Detector (ft)	0	-10		0	-10		0	100		0	100	
Detector 1 Position(ft)	0	-10		0	-10		0	100		0	100	
Detector 1 Size(ft)	20	32		20	32		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)								200			200	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		D.P+P	NA	
Protected Phases		4			4			2		1	12	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		1	1	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0		5.0		
Minimum Split (s)	12.0	12.0		12.0	12.0		21.6	21.6		9.0		
Total Split (s)	30.0	30.0		30.0	30.0		51.6	51.6		12.0		
Total Split (%)	26.0%	26.0%		26.0%	26.0%		44.6%	44.6%		10.4%		
Maximum Green (s)	25.0	25.0		25.0	25.0		45.0	45.0		8.0		
Yellow Time (s)	3.3	3.3		3.3	3.3		4.2	4.2		3.0		

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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)	
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	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	22.0
Total Split (s)	22.0
Total Split (%)	19%
Maximum Green (s)	18.0
Yellow Time (s)	4.0

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	1.7	1.7		1.7	1.7		2.4	2.4		1.0		
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.0			5.0			6.6				
Lead/Lag	Lag	Lag		Lag	Lag		Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes		
Vehicle Extension (s)	1.5	1.5		1.5	1.5		2.5	2.5		3.0		
Recall Mode	None	None		None	None		Min	Min		None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		11.2			11.2			24.3				36.1
Actuated g/C Ratio		0.17			0.17			0.38				0.56
v/c Ratio		0.03			0.55			0.81				0.76
Control Delay		29.4			30.3			29.6				19.0
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		29.4			30.3			29.6				19.0
LOS		C			C			C				B
Approach Delay		29.4			30.3			29.6				19.0
Approach LOS		C			C			C				B
Queue Length 50th (ft)		2			33			144				91
Queue Length 95th (ft)		18			130			415				#430
Internal Link Dist (ft)		280			722			2510				627
Turn Bay Length (ft)												
Base Capacity (vph)		589			623			1348				848
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			0.24			0.40				0.76

Intersection Summary

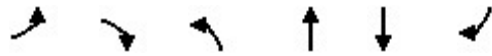
Area Type: Other  
 Cycle Length: 115.6  
 Actuated Cycle Length: 64.3  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.81  
 Intersection Signal Delay: 24.5 Intersection LOS: C  
 Intersection Capacity Utilization 73.9% ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd



Lane Group	Ø3
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	5
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 11: Harris Rd/W Avon Rd (RT 167) & W Avon Rd (RT167) AM PEAK



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	238	97	29	171	355	84
Future Volume (vph)	238	97	29	171	355	84
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	0.961			0.974		
Flt Protected	0.966			0.993		
Satd. Flow (prot)	1729	0	0	1850	1814	0
Flt Permitted	0.966			0.993		
Satd. Flow (perm)	1729	0	0	1850	1814	0
Link Speed (mph)	40			30	40	
Link Distance (ft)	781			809	2590	
Travel Time (s)	13.3			18.4	44.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	256	104	31	184	382	90
Shared Lane Traffic (%)						
Lane Group Flow (vph)	360	0	0	215	472	0
Sign Control	Stop			Stop	Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	59.4% <span style="float: right;">ICU Level of Service B</span>
Analysis Period (min)	15

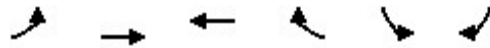
Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 11: Harris Rd/W Avon Rd (RT 167) & W Avon Rd (RT167) AM PEAK

Intersection	
Intersection Delay, s/veh	16.7
Intersection LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	238	97	29	171	355	84
Future Vol, veh/h	238	97	29	171	355	84
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	256	104	31	184	382	90
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	16.2	11.9	19.3
HCM LOS	C	B	C

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	14%	71%	0%
Vol Thru, %	85%	0%	81%
Vol Right, %	0%	29%	19%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	200	335	439
LT Vol	29	238	0
Through Vol	171	0	355
RT Vol	0	97	84
Lane Flow Rate	215	360	472
Geometry Grp	1	1	1
Degree of Util (X)	0.345	0.572	0.691
Departure Headway (Hd)	5.777	5.714	5.27
Convergence, Y/N	Yes	Yes	Yes
Cap	619	630	684
Service Time	3.836	3.763	3.318
HCM Lane V/C Ratio	0.347	0.571	0.69
HCM Control Delay	11.9	16.2	19.3
HCM Lane LOS	B	C	C
HCM 95th-tile Q	1.5	3.6	5.5



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	102	220	40	19	53	115
Future Volume (vph)	102	220	40	19	53	115
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			0.956		0.908	
Flt Protected		0.984			0.984	
Satd. Flow (prot)	0	1798	1747	0	1632	0
Flt Permitted		0.984			0.984	
Satd. Flow (perm)	0	1798	1747	0	1632	0
Link Speed (mph)		30	30		25	
Link Distance (ft)		546	304		789	
Travel Time (s)		12.4	6.9		21.5	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	121	262	48	23	63	137
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	383	71	0	200	0
Sign Control		Free	Free		Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	40.6%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	5.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	102	220	40	19	53	115
Future Vol, veh/h	102	220	40	19	53	115
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	121	262	48	23	63	137

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	71	0	-	0	564 60
Stage 1	-	-	-	-	60 -
Stage 2	-	-	-	-	504 -
Critical Hdwy	4.14	-	-	-	6.44 6.24
Critical Hdwy Stg 1	-	-	-	-	5.44 -
Critical Hdwy Stg 2	-	-	-	-	5.44 -
Follow-up Hdwy	2.236	-	-	-	3.536 3.336
Pot Cap-1 Maneuver	1517	-	-	-	483 1000
Stage 1	-	-	-	-	958 -
Stage 2	-	-	-	-	603 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1517	-	-	-	438 1000
Mov Cap-2 Maneuver	-	-	-	-	438 -
Stage 1	-	-	-	-	869 -
Stage 2	-	-	-	-	603 -

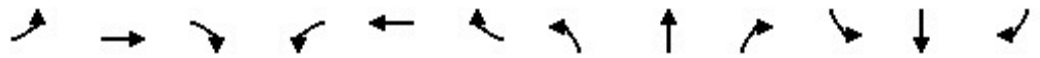
Approach	EB	WB	SB
HCM Control Delay, s	2.4	0	12
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1517	-	-	-	712
HCM Lane V/C Ratio	0.08	-	-	-	0.281
HCM Control Delay (s)	7.6	0	-	-	12
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	1.2

Farmington Connectivity Study  
13: Stafford Ave & Stevens St

2050 Scenario 3 (Route 177 Closed & No Build) Conditions

AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	20	287	95	91	117	16	57	110	74	51	193	31
Future Volume (vph)	20	287	95	91	117	16	57	110	74	51	193	31
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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00			0.99			1.00	
Frt		0.968			0.990			0.958			0.985	
Flt Protected		0.997			0.980			0.988			0.991	
Satd. Flow (prot)	0	1785	0	0	1807	0	0	1751	0	0	1818	0
Flt Permitted		0.978			0.627			0.753			0.844	
Satd. Flow (perm)	0	1751	0	0	1154	0	0	1335	0	0	1548	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		543			653			565			383	
Travel Time (s)		12.3			14.8			12.8			8.7	
Confl. Peds. (#/hr)			8	8					1	1		
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	24	338	112	107	138	19	67	129	87	60	227	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	474	0	0	264	0	0	283	0	0	323	0
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	81		20	81		20	116		20	106	
Trailing Detector (ft)	0	75		0	75		0	110		0	100	
Detector 1 Position(ft)	0	75		0	75		0	110		0	100	
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	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	19.0	19.0		19.0	19.0		19.0	19.0		19.0	19.0	
Total Split (s)	34.0	34.0		34.0	34.0		29.0	29.0		29.0	29.0	
Total Split (%)	41.5%	41.5%		41.5%	41.5%		35.4%	35.4%		35.4%	35.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	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			4.0			4.0	
Lead/Lag							Lag	Lag		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		2.0	2.0		2.0	2.0	

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	19.0
Total Split (s)	19.0
Total Split (%)	23%
Maximum Green (s)	17.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0

Farmington Connectivity Study  
13: Stafford Ave & Stevens St

2050 Scenario 3 (Route 177 Closed & No Build) Conditions

AM PEAK

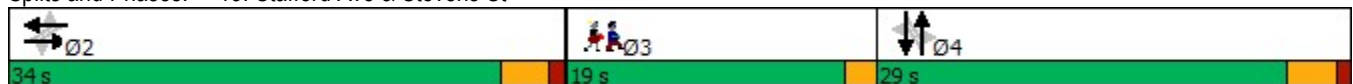


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		30.1			30.1			18.5				18.5
Actuated g/C Ratio		0.40			0.40			0.24				0.24
v/c Ratio		0.68			0.58			0.87				0.85
Control Delay		25.9			25.0			53.5				48.9
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		25.9			25.0			53.5				48.9
LOS		C			C			D				D
Approach Delay		25.9			25.0			53.5				48.9
Approach LOS		C			C			D				D
Queue Length 50th (ft)		173			91			127				145
Queue Length 95th (ft)		295			178			200				219
Internal Link Dist (ft)		463			573			485				303
Turn Bay Length (ft)												
Base Capacity (vph)		696			458			442				512
Starvation Cap Reductn		0			0			0				0
Spillback Cap Reductn		0			0			0				0
Storage Cap Reductn		0			0			0				0
Reduced v/c Ratio		0.68			0.58			0.64				0.63

Intersection Summary

Area Type:	Other
Cycle Length:	82
Actuated Cycle Length:	75.6
Natural Cycle:	65
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.87
Intersection Signal Delay:	37.0
Intersection LOS:	D
Intersection Capacity Utilization:	64.4%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 13: Stafford Ave & Stevens St



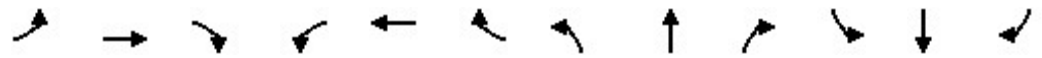
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Lane Group	Ø3
Recall Mode	Ped
Walk Time (s)	7.0
Flash Dont Walk (s)	10.0
Pedestrian Calls (#/hr)	9
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
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	
<hr/> Intersection Summary	

Farmington Connectivity Study  
 14: S Main St (RT 177) & Mill St

2050 Scenario 3 (Route 177 Closed & No Build) Conditions

AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗	↖	↗		↖	↗	
Traffic Volume (vph)	53	112	0	0	8	51	0	0	0	1	0	0
Future Volume (vph)	53	112	0	0	8	51	0	0	0	1	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		95	0		100	60		0	0		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
Frt						0.850						
Flt Protected		0.984								0.950		
Satd. Flow (prot)	0	1833	1863	0	1863	1583	1863	1863	0	1770	1863	0
Flt Permitted		0.890								0.757		
Satd. Flow (perm)	0	1658	1863	0	1863	1583	1863	1863	0	1410	1863	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			30			25			25	
Link Distance (ft)		906			356			584			461	
Travel Time (s)		24.7			8.1			15.9			12.6	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	55	117	0	0	8	53	0	0	0	1	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	172	0	0	8	53	0	0	0	1	0	0
Number of Detectors	1	1	1	1	1	1	1	0		0	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	50	50	20	40	40	50	0		0	0	
Trailing Detector (ft)	0	0	0	0	-10	-10	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	-10	-10	0	0		0	0	
Detector 1 Size(ft)	20	50	50	20	50	50	50	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA	pm+ov		NA	Prot	D.P+P			Perm		
Protected Phases		4	2		4	4	2	1 2				1
Permitted Phases	4		4	4			1			1		
Detector Phase	4	4	2	4	4	4	2	2		1	1	
Switch Phase												
Minimum Initial (s)	6.0	6.0	5.0	6.0	6.0	6.0	5.0			25.0	25.0	
Minimum Split (s)	10.3	10.3	9.6	10.3	10.3	10.3	9.6			29.6	29.6	
Total Split (s)	46.0	46.0	10.9	46.0	46.0	46.0	10.9			29.6	29.6	
Total Split (%)	41.3%	41.3%	9.8%	41.3%	41.3%	41.3%	9.8%			26.5%	26.5%	
Maximum Green (s)	41.7	41.7	6.3	41.7	41.7	41.7	6.3			25.0	25.0	
Yellow Time (s)	3.2	3.2	3.6	3.2	3.2	3.2	3.6			3.6	3.6	
All-Red Time (s)	1.1	1.1	1.0	1.1	1.1	1.1	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)		4.3	4.6		4.3	4.3	4.6			4.6	4.6	
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag			Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	

Lane Group	Ø3
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)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	25.0
Total Split (s)	25.0
Total Split (%)	22%
Maximum Green (s)	21.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes

Farmington Connectivity Study  
 14: S Main St (RT 177) & Mill St

2050 Scenario 3 (Route 177 Closed & No Build) Conditions

AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5			3.0	3.0	
Recall Mode	None	None	None	None	None	None	None			Max	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		9.0			9.0	9.0				26.8		
Actuated g/C Ratio		0.19			0.19	0.19				0.55		
v/c Ratio		0.56			0.02	0.18				0.00		
Control Delay		27.1			19.0	20.2				11.0		
Queue Delay		0.0			0.0	0.0				0.0		
Total Delay		27.1			19.0	20.2				11.0		
LOS		C			B	C				B		
Approach Delay		27.1			20.1							11.0
Approach LOS		C			C							B
Queue Length 50th (ft)		37			2	11				0		
Queue Length 95th (ft)		129			14	49				3		
Internal Link Dist (ft)		826			276			504				381
Turn Bay Length (ft)						100						
Base Capacity (vph)		1499			1684	1431				780		
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		0.11			0.00	0.04				0.00		

Intersection Summary

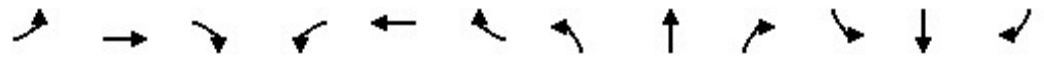
Area Type:	Other
Cycle Length:	111.5
Actuated Cycle Length:	48.4
Natural Cycle:	80
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.56
Intersection Signal Delay:	25.2
Intersection LOS:	C
Intersection Capacity Utilization:	43.7%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 14: S Main St (RT 177) & Mill St



Lane Group	Ø3
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	14.0
Pedestrian Calls (#/hr)	1
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 15: S Main St (RT 177) & Railroad Ave/New Britain Ave AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔		↔	↔	
Traffic Volume (vph)	0	5	49	44	1	0	19	0	87	0	0	0
Future Volume (vph)	0	5	49	44	1	0	19	0	87	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		200	80		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			80			50		
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		0.877						0.850				
Flt Protected					0.953		0.950					
Satd. Flow (prot)	0	1618	0	0	1758	1845	1752	1529	0	1845	1845	0
Flt Permitted					0.747		0.757					
Satd. Flow (perm)	0	1618	0	0	1378	1845	1396	1529	0	1845	1845	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			30			25				25
Link Distance (ft)		579			590			1222				584
Travel Time (s)		15.8			13.4			33.3				15.9
Confl. Peds. (#/hr)									4	4		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	0	5	51	45	1	0	20	0	90	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	56	0	0	46	0	20	90	0	0	0	0
Number of Detectors	1	1		1	1	1	0	2		1	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40	40	0	206		50	206	
Trailing Detector (ft)	0	-10		0	-10	-10	0	100		0	100	
Detector 1 Position(ft)	0	-10		0	-10	-10	0	100		0	100	
Detector 1 Size(ft)	20	50		20	50	50	20	6		50	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)								200				200
Detector 2 Size(ft)								6				6
Detector 2 Type								Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)								0.0				0.0
Turn Type		NA		Perm	NA	pt+ov	Perm	NA		D.P+P		
Protected Phases		4			4	2 4		1		2	1 2	
Permitted Phases	4			4			1			1		
Detector Phase	4	4		4	4	4	1	1		2	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		25.0	25.0		5.0		
Minimum Split (s)	10.2	10.2		10.2	10.2		29.6	29.6		9.6		
Total Split (s)	38.0	38.0		38.0	38.0		59.0	59.0		11.4		

Lane Group	Ø3
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)	
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	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	23.0
Total Split (s)	23.0

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 15: S Main St (RT 177) & Railroad Ave/New Britain Ave AM PEAK

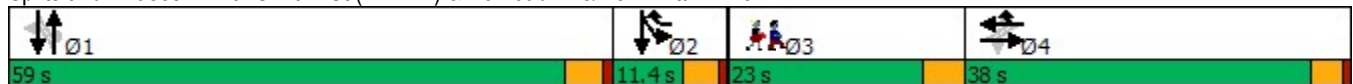


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	28.9%	28.9%		28.9%	28.9%		44.9%	44.9%		8.7%		
Maximum Green (s)	33.8	33.8		33.8	33.8		54.4	54.4		6.8		
Yellow Time (s)	3.2	3.2		3.2	3.2		3.6	3.6		3.6		
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0		
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0		
Total Lost Time (s)		4.2			4.2		4.6	4.6		4.6		
Lead/Lag	Lag	Lag		Lag	Lag		Lead	Lead		Lag		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes		
Vehicle Extension (s)	1.5	1.5		1.5	1.5		2.5	2.5		1.5		
Recall Mode	None	None		None	None		Min	Min		None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		6.6			6.6		31.9	31.9				
Actuated g/C Ratio		0.14			0.14		0.67	0.67				
v/c Ratio		0.25			0.24		0.02	0.09				
Control Delay		23.1			23.5		8.0	7.5				
Queue Delay		0.0			0.0		0.0	0.0				
Total Delay		23.1			23.5		8.0	7.5				
LOS		C			C		A	A				
Approach Delay		23.1			23.5			7.6				
Approach LOS		C			C			A				
Queue Length 50th (ft)		11			9		1	6				
Queue Length 95th (ft)		51			45		17	50				
Internal Link Dist (ft)		499			510			1142			504	
Turn Bay Length (ft)							80					
Base Capacity (vph)		1182			1007		1349	1478				
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		0.05			0.05		0.01	0.06				

Intersection Summary

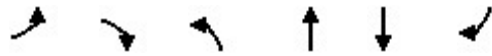
Area Type:	Other
Cycle Length:	131.4
Actuated Cycle Length:	47.8
Natural Cycle:	75
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.25
Intersection Signal Delay:	15.1
Intersection LOS:	B
Intersection Capacity Utilization:	37.3%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 15: S Main St (RT 177) & Railroad Ave/New Britain Ave



Lane Group	Ø3
Total Split (%)	18%
Maximum Green (s)	19.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	4
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 16: S Main St (RT 177) & Webster St AM PEAK



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	367	213	157	113	4
Future Volume (vph)	3	367	213	157	113	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>	0.866			0.995		
Fl <sub>t</sub> Protected				0.972		
Satd. Flow (prot)	1582	0	0	1776	1818	0
Fl <sub>t</sub> Permitted				0.972		
Satd. Flow (perm)	1582	0	0	1776	1818	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	805			584	1222	
Travel Time (s)	22.0			15.9	33.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	3	374	217	160	115	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	377	0	0	377	119	0
Sign Control	Stop			Free	Free	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.3% <span style="float: right;">ICU Level of Service B</span>
Analysis Period (min)	15

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 16: S Main St (RT 177) & Webster St AM PEAK

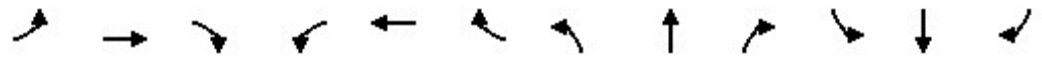
Intersection						
Int Delay, s/veh	7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	3	367	213	157	113	4
Future Vol, veh/h	3	367	213	157	113	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	3	374	217	160	115	4

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	711	117	119	0	0
Stage 1	117	-	-	-	-
Stage 2	594	-	-	-	-
Critical Hdwy	6.44	6.24	4.14	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.236	-	-
Pot Cap-1 Maneuver	397	930	1457	-	-
Stage 1	903	-	-	-	-
Stage 2	548	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	332	930	1457	-	-
Mov Cap-2 Maneuver	332	-	-	-	-
Stage 1	756	-	-	-	-
Stage 2	548	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.6	4.6	0
HCM LOS	B		

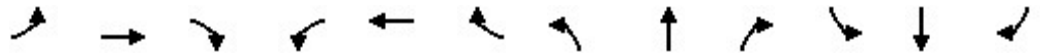
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1457	-	917	-	-
HCM Lane V/C Ratio	0.149	-	0.412	-	-
HCM Control Delay (s)	7.9	0	11.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.5	-	2	-	-

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 17: Plainville Ave (RT 177) & Coopermine Rd AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	55	84	61	81	21	10	34	377	110	41	582	39
Future Volume (vph)	55	84	61	81	21	10	34	377	110	41	582	39
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	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.959			0.988			0.971			0.992	
Fl <sub>t</sub> Protected		0.986			0.965			0.997			0.997	
Satd. Flow (prot)	0	1779	0	0	1794	0	0	1821	0	0	1861	0
Fl <sub>t</sub> Permitted		0.881			0.556			0.923			0.938	
Satd. Flow (perm)	0	1589	0	0	1033	0	0	1686	0	0	1750	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			5			20			5	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		498			472			529			491	
Travel Time (s)		9.7			9.2			10.3			9.6	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	63	95	69	92	24	11	39	428	125	47	661	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	227	0	0	127	0	0	592	0	0	752	0
Number of Detectors	1	3		1	3		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	24		20	24		20	361		20	361	
Trailing Detector (ft)	0	-10		0	-10		0	185		0	185	
Detector 1 Position(ft)	0	-10		0	-10		0	185		0	185	
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)		6			6			355			355	
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	
Detector 3 Position(ft)		18			18							
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	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	20.5	20.5		20.5	20.5		21.9	21.9		21.9	21.9	
Total Split (s)	40.5	40.5		40.5	40.5		66.9	66.9		66.9	66.9	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 17: Plainville Ave (RT 177) & Coopermine Rd AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	37.7%	37.7%		37.7%	37.7%		62.3%	62.3%		62.3%	62.3%	
Maximum Green (s)	35.0	35.0		35.0	35.0		60.0	60.0		60.0	60.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		4.4	4.4		4.4	4.4	
All-Red Time (s)	2.2	2.2		2.2	2.2		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.5			5.5			6.9			6.9	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5		1.5	1.5		5.0	5.0		5.0	5.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	14.0	14.0		14.0	14.0							
Flash Dont Walk (s)	1.0	1.0		1.0	1.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		15.1			15.1			50.1			50.1	
Actuated g/C Ratio		0.19			0.19			0.64			0.64	
v/c Ratio		0.70			0.63			0.55			0.67	
Control Delay		41.4			45.7			10.1			12.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		41.4			45.7			10.1			12.9	
LOS		D			D			B			B	
Approach Delay		41.4			45.7			10.1			12.9	
Approach LOS		D			D			B			B	
Queue Length 50th (ft)		109			64			132			198	
Queue Length 95th (ft)		181			120			260			385	
Internal Link Dist (ft)		418			392			449			411	
Turn Bay Length (ft)												
Base Capacity (vph)		769			495			1296			1342	
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		0.30			0.26			0.46			0.56	

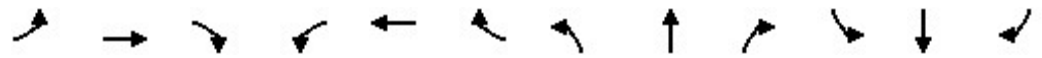
Intersection Summary

Area Type:	Other
Cycle Length:	107.4
Actuated Cycle Length:	78.4
Natural Cycle:	60
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.70
Intersection Signal Delay:	18.2
Intersection LOS:	B
Intersection Capacity Utilization:	69.5%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 17: Plainville Ave (RT 177) & Coopermine Rd

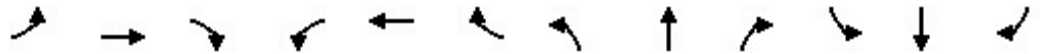


Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (vph)	45	209	265	16	49	29	108	481	32	81	729	22
Future Volume (vph)	45	209	265	16	49	29	108	481	32	81	729	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	250		0	80		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			100			40		
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		0.931			0.958			0.991			0.996	
Flt Protected		0.996			0.992		0.950			0.950		
Satd. Flow (prot)	0	1727	0	0	1770	0	1770	1846	0	1770	1855	0
Flt Permitted		0.965			0.852		0.106			0.366		
Satd. Flow (perm)	0	1674	0	0	1520	0	197	1846	0	682	1855	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					18			4				2
Link Speed (mph)		30			30			45				45
Link Distance (ft)		594			761			713				527
Travel Time (s)		13.5			17.3			10.8				8.0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	46	213	270	16	50	30	110	491	33	83	744	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	529	0	0	96	0	110	524	0	83	766	0
Number of Detectors	1	3		1	2		3	1		3	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	18		20	12		24	356		24	206	
Trailing Detector (ft)	0	-10		0	-6		-6	350		-6	200	
Detector 1 Position(ft)	0	-10		0	-6		-6	350		-6	200	
Detector 1 Size(ft)	20	6		20	6		6	6		6	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)		0			6			6			6	
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	
Detector 3 Position(ft)		12						18			18	
Detector 3 Size(ft)		6						6			6	
Detector 3 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		3.0	30.0		3.0	30.0	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	30.9	30.9		30.9	30.9		7.0	37.1		7.0	37.1	
Total Split (s)	34.9	34.9		34.9	34.9		19.0	67.1		12.0	67.1	
Total Split (%)	28.8%	28.8%		28.8%	28.8%		15.7%	55.5%		9.9%	55.5%	
Maximum Green (s)	30.0	30.0		30.0	30.0		15.0	60.0		8.0	60.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.0	4.4		3.0	4.4	
All-Red Time (s)	1.6	1.6		1.6	1.6		1.0	2.7		1.0	2.7	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.9			4.9		4.0	7.1		4.0	7.1	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)	25.0	25.0		25.0	25.0							
Flash Dont Walk (s)	1.0	1.0		1.0	1.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		30.5			30.5		62.2	51.8		57.1	47.5	
Actuated g/C Ratio		0.30			0.30		0.61	0.50		0.56	0.46	
v/c Ratio		1.07			0.21		0.44	0.56		0.19	0.89	
Control Delay		97.0			27.1		13.1	20.3		8.5	39.1	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		97.0			27.1		13.1	20.3		8.5	39.1	
LOS		F			C		B	C		A	D	
Approach Delay		97.0			27.1			19.1			36.1	
Approach LOS		F			C			B			D	
Queue Length 50th (ft)		~395			39		27	234		20	442	
Queue Length 95th (ft)		#710			94		47	339		37	646	
Internal Link Dist (ft)		514			681			633			447	
Turn Bay Length (ft)							250			80		
Base Capacity (vph)		496			462		354	1223		475	1100	
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		1.07			0.21		0.31	0.43		0.17	0.70	

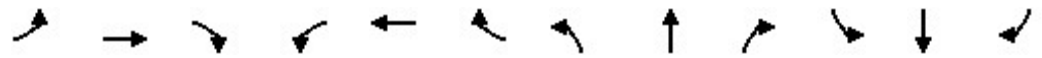
Intersection Summary

Area Type:	Other
Cycle Length:	121
Actuated Cycle Length:	102.8
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.07
Intersection Signal Delay:	45.8
Intersection LOS:	D
Intersection Capacity Utilization:	93.2%
ICU Level of Service:	F
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd



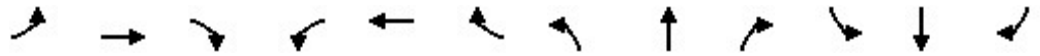
Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6) AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	718	167	124	293	70	92	453	152	250	822	59
Future Volume (vph)	78	718	167	124	293	70	92	453	152	250	822	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260		260	180		0	250		250	165		165
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (ft)	190			170			150			115		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor				1.00			1.00			1.00	1.00	
Frt			0.850		0.971				0.850		0.990	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	3437	0	1770	1863	1583	1770	3500	0
Flt Permitted	0.950			0.950			0.120			0.102		
Satd. Flow (perm)	1770	1863	1583	1767	3437	0	223	1863	1583	190	3500	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			106		19				127		4	
Link Speed (mph)		45			45			40			45	
Link Distance (ft)		780			1567			643			474	
Travel Time (s)		11.8			23.7			11.0			7.2	
Confl. Peds. (#/hr)			1	1			3		1	1		3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	84	772	180	133	315	75	99	487	163	269	884	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	84	772	180	133	390	0	99	487	163	269	947	0
Number of Detectors	3	2	2	3	2		3	3	3	3	3	
Detector Template												
Leading Detector (ft)	24	306	306	24	306		24	24	24	24	24	
Trailing Detector (ft)	-6	150	150	-6	150		-6	-6	-6	-6	-6	
Detector 1 Position(ft)	-6	150	150	-6	150		-6	-6	-6	-6	-6	
Detector 1 Size(ft)	6	6	6	6	6		6	6	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	6	300	300	6	300		6	6	6	6	6	
Detector 2 Size(ft)	6	6	6	6	6		6	6	6	6	6	
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 3 Position(ft)	18			18			18	18	18	18	18	
Detector 3 Size(ft)	6			6			6	6	6	6	6	
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0	0.0	0.0	0.0	
Turn Type	Prot	NA	Prot	Prot	NA		pm+pt	NA	pt+ov	pm+pt	NA	
Protected Phases	1	6	6	5	2		3	8	5 8	7	4	
Permitted Phases							8			4		
Detector Phase	1	6	6	5	2		3	8	8	7	4	

Lane Group	Ø9
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	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6) AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
<b>Switch Phase</b>												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0		5.0	9.0		5.0	9.0	
Minimum Split (s)	9.0	20.2	20.2	9.0	20.2		9.0	14.7		9.0	14.7	
Total Split (s)	14.0	45.2	45.2	14.0	35.2		19.0	40.7		19.0	40.7	
Total Split (%)	9.3%	30.0%	30.0%	9.3%	23.3%		12.6%	27.0%		12.6%	27.0%	
Maximum Green (s)	10.0	40.0	40.0	10.0	30.0		15.0	35.0		15.0	35.0	
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2		3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.2		1.0	1.2	
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)	4.0	5.2	5.2	4.0	5.2		4.0	5.7		4.0	5.7	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	2.5	2.5	1.5	2.5		2.0	3.0		2.0	2.0	
Recall Mode	None	Min	Min	None	Min		None	None		None	None	
<b>Walk Time (s)</b>												
<b>Flash Dont Walk (s)</b>												
<b>Pedestrian Calls (#/hr)</b>												
Act Effct Green (s)	9.0	40.4	40.4	10.1	41.5		45.9	35.3	50.5	55.7	41.6	
Actuated g/C Ratio	0.07	0.32	0.32	0.08	0.33		0.37	0.28	0.40	0.44	0.33	
v/c Ratio	0.67	1.29	0.31	0.94	0.34		0.52	0.93	0.23	0.98	0.81	
Control Delay	82.6	177.6	16.4	118.1	32.8		33.3	69.4	6.6	82.8	45.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	82.6	177.6	16.4	118.1	32.8		33.3	69.4	6.6	82.8	45.6	
LOS	F	F	B	F	C		C	E	A	F	D	
Approach Delay		141.9			54.5			50.9			53.8	
Approach LOS		F			D			D			D	
Queue Length 50th (ft)	63	~732	39	103	111		42	357	16	152	336	
Queue Length 95th (ft)	#170	#1325	128	#295	212		110	#780	52	#463	#707	
Internal Link Dist (ft)		700			1487			563			394	
Turn Bay Length (ft)	260		260	180			250		250	165		
Base Capacity (vph)	142	599	581	142	1149		280	525	713	275	1164	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.59	1.29	0.31	0.94	0.34		0.35	0.93	0.23	0.98	0.81	










**Intersection Summary**

Area Type: Other  
 Cycle Length: 150.9  
 Actuated Cycle Length: 125.3  
 Natural Cycle: 145  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.29  
 Intersection Signal Delay: 79.2 Intersection LOS: E  
 Intersection Capacity Utilization 98.1% 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.

Lane Group	Ø9
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	32.0
Total Split (s)	32.0
Total Split (%)	21%
Maximum Green (s)	28.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
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)	21.0
Pedestrian Calls (#/hr)	7
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

Queue shown is maximum after two cycles.

Splits and Phases: 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)

 Ø1	 Ø2	 Ø3	 Ø4	 Ø9
14 s	35.2 s	19 s	40.7 s	32 s
 Ø5	 Ø6	 Ø7	 Ø8	
14 s	45.2 s	19 s	40.7 s	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 20: Unionville Ave (RT 177) & Northwest Dr AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	190	81	34	151	45	235	521	159	120	786	73
Future Volume (vph)	34	190	81	34	151	45	235	521	159	120	786	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	210		0	260		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
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		0.955			0.965			0.965			0.987	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	1745	0	1736	1763	0	1736	3350	0	1736	3426	0
Flt Permitted	0.543			0.377			0.152			0.281		
Satd. Flow (perm)	992	1745	0	689	1763	0	278	3350	0	513	3426	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			11			30			8	
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		710			592			572			675	
Travel Time (s)		13.8			11.5			9.8			11.5	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	38	213	91	38	170	51	264	585	179	135	883	82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	38	304	0	38	221	0	264	764	0	135	965	0
Number of Detectors	3	3		3	3		3	2		3	2	
Detector Template												
Leading Detector (ft)	24	24		24	24		24	331		24	331	
Trailing Detector (ft)	-6	-6		-6	-6		-6	150		-6	150	
Detector 1 Position(ft)	-6	-6		-6	-6		-6	150		-6	150	
Detector 1 Size(ft)	6	6		6	6		6	6		6	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)	6	6		6	6		6	325		6	325	
Detector 2 Size(ft)	6	6		6	6		6	6		6	6	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 3 Position(ft)	18	18		18	18		18			18		
Detector 3 Size(ft)	6	6		6	6		6			6		
Detector 3 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex		
Detector 3 Channel												
Detector 3 Extend (s)	0.0	0.0		0.0	0.0		0.0			0.0		
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	
Switch Phase												

Lane Group	Ø9
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)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 20: Unionville Ave (RT 177) & Northwest Dr AM PEAK












Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	9.0		4.0	9.0		4.0	15.0		4.0	15.0	
Minimum Split (s)	8.0	15.2		8.0	15.2		8.0	22.5		8.0	22.5	
Total Split (s)	14.0	23.2		12.0	21.2		12.0	27.5		18.0	33.5	
Total Split (%)	12.1%	20.1%		10.4%	18.3%		10.4%	23.8%		15.6%	29.0%	
Maximum Green (s)	10.0	17.0		8.0	15.0		8.0	20.0		14.0	26.0	
Yellow Time (s)	3.0	4.1		3.0	4.1		3.0	4.8		3.0	4.8	
All-Red Time (s)	1.0	2.1		1.0	2.1		1.0	2.7		1.0	2.7	
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	6.2		4.0	6.2		4.0	7.5		4.0	7.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	3.0		1.5	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	22.9	17.1		22.9	17.1		38.7	27.1		36.7	26.1	
Actuated g/C Ratio	0.31	0.23		0.31	0.23		0.52	0.36		0.49	0.35	
v/c Ratio	0.11	0.74		0.13	0.54		0.88	0.62		0.37	0.80	
Control Delay	16.9	39.6		17.3	31.0		47.3	22.9		12.3	29.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	16.9	39.6		17.3	31.0		47.3	22.9		12.3	29.3	
LOS	B	D		B	C		D	C		B	C	
Approach Delay		37.1			29.0			29.2			27.2	
Approach LOS		D			C			C			C	
Queue Length 50th (ft)	12	133		12	92		70	157		31	225	
Queue Length 95th (ft)	30	#257		30	162		#223	231		61	#332	
Internal Link Dist (ft)		630			512			492			595	
Turn Bay Length (ft)							210			260		
Base Capacity (vph)	429	410		331	410		300	1231		515	1200	
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	0.74		0.11	0.54		0.88	0.62		0.26	0.80	

Intersection Summary

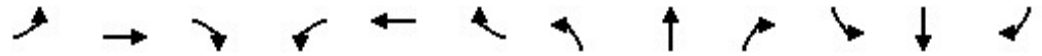
Area Type: Other  
 Cycle Length: 115.7  
 Actuated Cycle Length: 74.9  
 Natural Cycle: 140  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.88  
 Intersection Signal Delay: 29.4 Intersection LOS: C  
 Intersection Capacity Utilization 73.4% ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 20: Unionville Ave (RT 177) & Northwest Dr

				
12 s	33.5 s	12 s	23.2 s	35 s
				
18 s	27.5 s	14 s	21.2 s	

Lane Group	Ø9
Minimum Initial (s)	1.0
Minimum Split (s)	35.0
Total Split (s)	35.0
Total Split (%)	30%
Maximum Green (s)	31.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
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)	24.0
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	
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	
<b>Intersection Summary</b>	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 21: New Britain Ave & Red Oak Hill Rd AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	5	270	77	11	66	41	17	35	8	115	93	5
Future Volume (vph)	5	270	77	11	66	41	17	35	8	115	93	5
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	1.00	1.00	1.00	1.00	1.00
Frt		0.970			0.953			0.981			0.997	
Flt Protected		0.999			0.995			0.986			0.974	
Satd. Flow (prot)	0	1788	0	0	1749	0	0	1784	0	0	1791	0
Flt Permitted		0.999			0.995			0.986			0.974	
Satd. Flow (perm)	0	1788	0	0	1749	0	0	1784	0	0	1791	0
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		506			528			2775			437	
Travel Time (s)		9.9			10.3			63.1			9.9	
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 (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	5	293	84	12	72	45	18	38	9	125	101	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	382	0	0	129	0	0	65	0	0	231	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	44.9%
ICU Level of Service	A
Analysis Period (min)	15

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 21: New Britain Ave & Red Oak Hill Rd AM PEAK

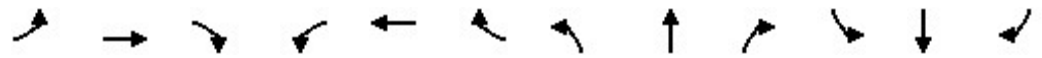
Intersection	
Intersection Delay, s/veh	11.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	270	77	11	66	41	17	35	8	115	93	5
Future Vol, veh/h	5	270	77	11	66	41	17	35	8	115	93	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, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	5	293	84	12	72	45	18	38	9	125	101	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13	9.3	9.3	11.4
HCM LOS	B	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	28%	1%	9%	54%
Vol Thru, %	58%	77%	56%	44%
Vol Right, %	13%	22%	35%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	60	352	118	213
LT Vol	17	5	11	115
Through Vol	35	270	66	93
RT Vol	8	77	41	5
Lane Flow Rate	65	383	128	232
Geometry Grp	1	1	1	1
Degree of Util (X)	0.102	0.519	0.183	0.351
Departure Headway (Hd)	5.631	4.88	5.144	5.452
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	636	742	698	660
Service Time	3.67	2.88	3.175	3.483
HCM Lane V/C Ratio	0.102	0.516	0.183	0.352
HCM Control Delay	9.3	13	9.3	11.4
HCM Lane LOS	A	B	A	B
HCM 95th-tile Q	0.3	3	0.7	1.6

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 22: New Britain Ave & Meadow Rd AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	52	156	101	20	81	0	27	68	5	0	156	48
Future Volume (vph)	52	156	101	20	81	0	27	68	5	0	156	48
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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.956						0.993			0.968	
Flt Protected		0.992			0.990			0.987				
Satd. Flow (prot)	0	1716	0	0	1791	0	0	1773	0	0	1752	0
Flt Permitted		0.992			0.990			0.987				
Satd. Flow (perm)	0	1716	0	0	1791	0	0	1773	0	0	1752	0
Link Speed (mph)		30			35			30			30	
Link Distance (ft)		414			396			469			2775	
Travel Time (s)		9.4			7.7			10.7			63.1	
Confl. Peds. (#/hr)							2		1	1		2
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	64	193	125	25	100	0	33	84	6	0	193	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	382	0	0	125	0	0	123	0	0	252	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	49.0% ICU Level of Service A
Analysis Period (min)	15

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	52	156	101	20	81	0	27	68	5	0	156	48
Future Vol, veh/h	52	156	101	20	81	0	27	68	5	0	156	48
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	64	193	125	25	100	0	33	84	6	0	193	59
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14	10.1	10.3	11.8
HCM LOS	B	B	B	B

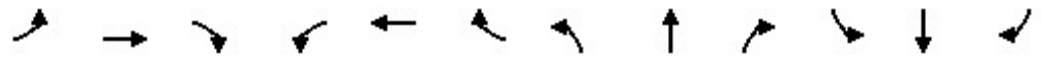
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	27%	17%	20%	0%
Vol Thru, %	68%	50%	80%	76%
Vol Right, %	5%	33%	0%	24%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	309	101	204
LT Vol	27	52	20	0
Through Vol	68	156	81	156
RT Vol	5	101	0	48
Lane Flow Rate	123	381	125	252
Geometry Grp	1	1	1	1
Degree of Util (X)	0.199	0.54	0.197	0.379
Departure Headway (Hd)	5.808	5.097	5.687	5.422
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	616	706	630	662
Service Time	3.858	3.13	3.732	3.464
HCM Lane V/C Ratio	0.2	0.54	0.198	0.381
HCM Control Delay	10.3	14	10.1	11.8
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	0.7	3.3	0.7	1.8

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 23: New Britain Ave & Scott Swamp Rd (US 6) AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	854	34	10	548	71	28	31	10	130	74	44
Future Volume (vph)	25	854	34	10	548	71	28	31	10	130	74	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	340		0	100		320	190		0	120		0
Storage Lanes	1		0	1		1	1		0	2		0
Taper Length (ft)	150			100			100			110		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.994				0.850		0.962			0.944	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3518	0	1770	3539	1583	1770	1792	0	3433	1758	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3518	0	1770	3539	1583	1770	1792	0	3433	1758	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				108		12			32	
Link Speed (mph)		45			45			25			35	
Link Distance (ft)		3978			920			676			631	
Travel Time (s)		60.3			13.9			18.4			12.3	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	29	1005	40	12	645	84	33	36	12	153	87	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	29	1045	0	12	645	84	33	48	0	153	139	0
Number of Detectors	3	0		3	0	0	3	3		3	3	
Detector Template												
Leading Detector (ft)	24	0		24	0	0	24	24		24	24	
Trailing Detector (ft)	-10	0		-10	0	0	-6	-6		-6	-6	
Detector 1 Position(ft)	-10	0		-10	0	0	-6	-6		-6	-6	
Detector 1 Size(ft)	6	6		6	6	20	6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
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)	6			6			6	6		6	6	
Detector 2 Size(ft)	6			6			6	6		6	6	
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0		0.0	0.0	
Detector 3 Position(ft)	18			18			18	18		18	18	
Detector 3 Size(ft)	6			6			6	6		6	6	
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0		0.0	0.0	
Turn Type	Prot	NA		Prot	NA	pt+ov	Split	NA		Split	NA	
Protected Phases	1	6		5	2	2 7	8	8		7	7	
Permitted Phases												
Detector Phase	1	6		5	2	2	8	8		7	7	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0		7.0	7.0	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 23: New Britain Ave & Scott Swamp Rd (US 6) AM PEAK

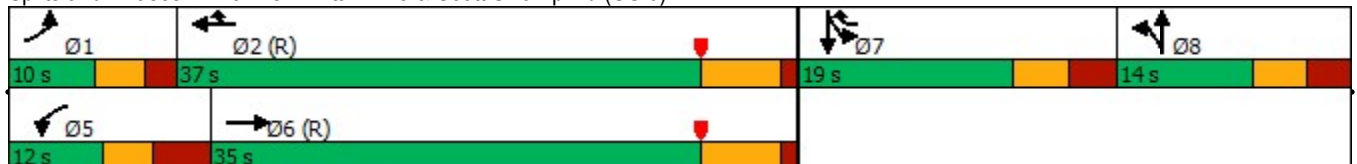


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.9	20.8		11.4	20.8		34.0	34.0		13.2	13.2	
Total Split (s)	10.0	35.0		12.0	37.0		14.0	14.0		19.0	19.0	
Total Split (%)	12.5%	43.8%		15.0%	46.3%		17.5%	17.5%		23.8%	23.8%	
Maximum Green (s)	5.1	29.2		5.6	31.2		8.0	8.0		12.8	12.8	
Yellow Time (s)	3.0	4.8		3.0	4.8		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.9	1.0		3.4	1.0		2.7	2.7		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.9	5.8		6.4	5.8		6.0	6.0		6.2	6.2	
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)							27.0	27.0				
Flash Dont Walk (s)							1.0	1.0				
Pedestrian Calls (#/hr)							0	0				
Act Effect Green (s)	5.5	45.9		5.3	44.0	61.0	6.3	6.3		9.6	9.6	
Actuated g/C Ratio	0.07	0.57		0.07	0.55	0.76	0.08	0.08		0.12	0.12	
v/c Ratio	0.24	0.52		0.10	0.33	0.07	0.24	0.32		0.37	0.58	
Control Delay	40.2	14.1		32.9	14.3	4.6	38.2	33.3		34.4	35.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	40.2	14.1		32.9	14.3	4.6	38.2	33.3		34.4	35.1	
LOS	D	B		C	B	A	D	C		C	D	
Approach Delay		14.8			13.5			35.3			34.7	
Approach LOS		B			B			D			C	
Queue Length 50th (ft)	14	148		6	62	0	16	17		37	51	
Queue Length 95th (ft)	38	294		22	201	41	39	45		58	95	
Internal Link Dist (ft)		3898			840			596			551	
Turn Bay Length (ft)	340			100		320	190			120		
Base Capacity (vph)	122	2021		123	1946	1231	177	190		549	308	
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	0.24	0.52		0.10	0.33	0.07	0.19	0.25		0.28	0.45	

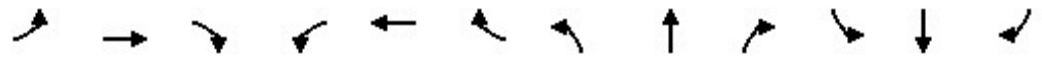
Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 43 (54%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.58  
 Intersection Signal Delay: 17.8  
 Intersection Capacity Utilization 45.1%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service A

Splits and Phases: 23: New Britain Ave & Scott Swamp Rd (US 6)



Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 24: Hyde Rd & Scott Swamp Rd (US 6) AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	1052	6	159	620	21	3	6	56	2	1	1
Future Volume (vph)	8	1052	6	159	620	21	3	6	56	2	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		0	360		0	0		0	0		0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	100			65			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.995				0.850			0.850
Flt Protected	0.950			0.950				0.982			0.968	
Satd. Flow (prot)	1787	3571	0	1787	3556	0	0	1847	1599	0	1821	1599
Flt Permitted	0.950			0.950				0.974				
Satd. Flow (perm)	1787	3571	0	1787	3556	0	0	1832	1599	0	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			7				54			113
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1090			523			762			370	
Travel Time (s)		16.5			7.9			20.8			10.1	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	9	1238	7	187	729	25	4	7	66	2	1	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	1245	0	187	754	0	0	11	66	0	3	1
Number of Detectors	3	0		3	0		1	3	3	1	3	3
Detector Template							Left			Left		
Leading Detector (ft)	24	0		24	0		20	24	24	20	24	24
Trailing Detector (ft)	-10	0		-10	0		0	-10	-10	0	-10	-10
Detector 1 Position(ft)	-10	0		-10	0		0	-10	-10	0	-10	-10
Detector 1 Size(ft)	6	6		6	6		20	6	6	20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	6			6			6	6	6		6	6
Detector 2 Size(ft)	6			6			6	6	6		6	6
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0	0.0		0.0	0.0
Detector 3 Position(ft)	18			18			18	18	18		18	18
Detector 3 Size(ft)	6			6			6	6	6		6	6
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	NA		Prot	NA		Perm	NA	pm+ov	Perm	NA	Perm
Protected Phases	1	6		5	2			4	5		4	
Permitted Phases							4		4	4		4
Detector Phase	1	6		5	2		4	4	5	4	4	4
Switch Phase												

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 24: Hyde Rd & Scott Swamp Rd (US 6) AM PEAK

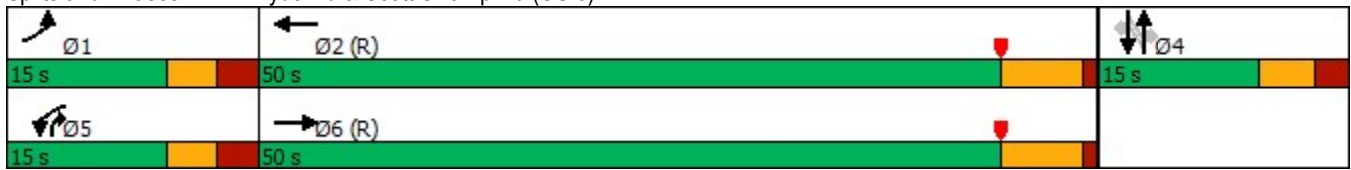


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0		7.0	7.0	5.0	7.0	7.0	7.0
Minimum Split (s)	10.5	21.8		10.5	21.8		30.5	30.5	10.5	30.5	30.5	30.5
Total Split (s)	15.0	50.0		15.0	50.0		15.0	15.0	15.0	15.0	15.0	15.0
Total Split (%)	18.8%	62.5%		18.8%	62.5%		18.8%	18.8%	18.8%	18.8%	18.8%	18.8%
Maximum Green (s)	9.5	44.2		9.5	44.2		9.5	9.5	9.5	9.5	9.5	9.5
Yellow Time (s)	3.0	4.8		3.0	4.8		3.3	3.3	3.0	3.3	3.3	3.3
All-Red Time (s)	2.5	1.0		2.5	1.0		2.2	2.2	2.5	2.2	2.2	2.2
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)	5.5	5.8		5.5	5.8		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	None
Walk Time (s)		15.0			15.0		24.0	24.0		24.0	24.0	24.0
Flash Dont Walk (s)		1.0			1.0		1.0	1.0		1.0	1.0	1.0
Pedestrian Calls (#/hr)		0			0		0	0		0	0	0
Act Effct Green (s)	5.3	51.5		12.2	70.4			7.0	17.2		7.0	7.0
Actuated g/C Ratio	0.07	0.64		0.15	0.88			0.09	0.22		0.09	0.09
v/c Ratio	0.08	0.54		0.69	0.24			0.07	0.17		0.02	0.00
Control Delay	43.8	4.8		43.9	4.0			34.7	9.4		33.7	0.0
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	43.8	4.8		43.9	4.0			34.7	9.4		33.7	0.0
LOS	D	A		D	A			C	A		C	A
Approach Delay		5.1			12.0			13.0			25.3	
Approach LOS		A			B			B			C	
Queue Length 50th (ft)	5	16		90	0			5	5		1	0
Queue Length 95th (ft)	m12	39		#164	122			20	29		9	0
Internal Link Dist (ft)		1010			443			682			290	
Turn Bay Length (ft)	130			360								
Base Capacity (vph)	212	2300		272	3128			217	386		223	289
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.04	0.54		0.69	0.24			0.05	0.17		0.01	0.00

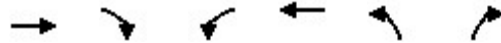
Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 2 (3%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.69  
 Intersection Signal Delay: 8.2 Intersection LOS: A  
 Intersection Capacity Utilization 57.9% 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: 24: Hyde Rd & Scott Swamp Rd (US 6)

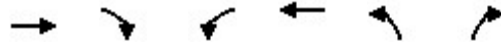


Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 25: Scott Swamp Rd (RT 552) & Scott Swamp Rd (US 6)/Colt Hwy (US 6) AM PEAK



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	
Traffic Volume (vph)	1025	168	106	706	166	17
Future Volume (vph)	1025	168	106	706	166	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		350	350		380	0
Storage Lanes		1	1		1	0
Taper Length (ft)			100		130	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	0.95
Frt		0.850			0.986	
Flt Protected			0.950		0.957	
Satd. Flow (prot)	3539	1583	1770	3539	3410	0
Flt Permitted			0.950		0.957	
Satd. Flow (perm)	3539	1583	1770	3539	3410	0
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			45	30	
Link Distance (ft)	1087			600	782	
Travel Time (s)	16.5			9.1	17.8	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	1206	198	125	831	195	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1206	198	125	831	215	0
Number of Detectors	0	0	3	0	1	
Detector Template						
Leading Detector (ft)	0	0	24	0	56	
Trailing Detector (ft)	0	0	-10	0	50	
Detector 1 Position(ft)	0	0	-10	0	50	
Detector 1 Size(ft)	6	20	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)			6			
Detector 2 Size(ft)			6			
Detector 2 Type			Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)			0.0			
Detector 3 Position(ft)			18			
Detector 3 Size(ft)			6			
Detector 3 Type			Cl+Ex			
Detector 3 Channel						
Detector 3 Extend (s)			0.0			
Turn Type	NA	pm+ov	Prot	NA	Prot	
Protected Phases	2	3	1	12	3	
Permitted Phases		2				
Detector Phase	2	3	1	2	3	
Switch Phase						
Minimum Initial (s)	15.0	7.0	5.0		7.0	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 25: Scott Swamp Rd (RT 552) & Scott Swamp Rd (US 6)/Colt Hwy (US 6) AM PEAK



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	21.0	29.5	9.0		29.5	
Total Split (s)	50.0	15.0	15.0		15.0	
Total Split (%)	62.5%	18.8%	18.8%		18.8%	
Maximum Green (s)	44.0	9.5	11.0		9.5	
Yellow Time (s)	5.0	3.0	3.0		3.0	
All-Red Time (s)	1.0	2.5	1.0		2.5	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.0	5.5	4.0		5.5	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	2.0		3.0	
Recall Mode	C-Max	None	Min		None	
Walk Time (s)		23.0			23.0	
Flash Dont Walk (s)		1.0			1.0	
Pedestrian Calls (#/hr)		0			0	
Act Effct Green (s)	46.6	61.3	9.2	61.9	8.6	
Actuated g/C Ratio	0.58	0.77	0.12	0.77	0.11	
v/c Ratio	0.58	0.16	0.61	0.30	0.58	
Control Delay	9.1	3.5	46.4	3.1	40.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	9.1	3.5	46.4	3.1	40.6	
LOS	A	A	D	A	D	
Approach Delay	8.3			8.8	40.6	
Approach LOS	A			A	D	
Queue Length 50th (ft)	247	58	60	50	53	
Queue Length 95th (ft)	61	18	105	64	81	
Internal Link Dist (ft)	1007			520	702	
Turn Bay Length (ft)		350	350		380	
Base Capacity (vph)	2062	1229	243	2736	404	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.58	0.16	0.51	0.30	0.53	

**Intersection Summary**

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 34 (43%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.61  
 Intersection Signal Delay: 11.2 Intersection LOS: B  
 Intersection Capacity Utilization 53.0% ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 25: Scott Swamp Rd (RT 552) & Scott Swamp Rd (US 6)/Colt Hwy (US 6)

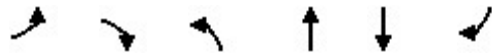


Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 26: Main St (RT 10) & Meadow Rd AM PEAK



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3
Lane Configurations							
Traffic Volume (vph)	326	132	85	453	322	78	
Future Volume (vph)	326	132	85	453	322	78	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor				1.00	1.00		
Frt	0.961				0.974		
Flt Protected	0.966			0.992			
Satd. Flow (prot)	1712	0	0	1830	1788	0	
Flt Permitted	0.966			0.520			
Satd. Flow (perm)	1712	0	0	959	1788	0	
Right Turn on Red		No				Yes	
Satd. Flow (RTOR)					11		
Link Speed (mph)	30			30	30		
Link Distance (ft)	345			413	499		
Travel Time (s)	7.8			9.4	11.3		
Confl. Peds. (#/hr)			3			3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	
Adj. Flow (vph)	362	147	94	503	358	87	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	509	0	0	597	445	0	
Number of Detectors	2		1	1	1		
Detector Template			Left				
Leading Detector (ft)	18		20	206	206		
Trailing Detector (ft)	0		0	200	200		
Detector 1 Position(ft)	0		0	200	200		
Detector 1 Size(ft)	6		20	6	6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		
Detector 2 Position(ft)	12						
Detector 2 Size(ft)	6						
Detector 2 Type	Cl+Ex						
Detector 2 Channel							
Detector 2 Extend (s)	0.0						
Turn Type	Prot		D.P+P	NA	NA		
Protected Phases	4		1	12	2	3	
Permitted Phases			2				
Detector Phase	4		1	1	2		
Switch Phase							
Minimum Initial (s)	5.0		3.0		15.0	1.0	
Minimum Split (s)	9.0		7.0		22.2	25.0	
Total Split (s)	34.0		12.0		39.2	25.0	
Total Split (%)	30.9%		10.9%		35.6%	23%	
Maximum Green (s)	30.0		8.0		32.0	21.0	
Yellow Time (s)	3.0		3.0		4.1	4.0	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 26: Main St (RT 10) & Meadow Rd AM PEAK

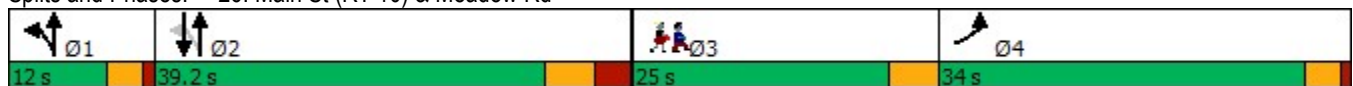


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3
All-Red Time (s)	1.0		1.0		3.1		0.0
Lost Time Adjust (s)	0.0				0.0		
Total Lost Time (s)	4.0				7.2		
Lead/Lag	Lag		Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	3.0		3.0		5.0		3.0
Recall Mode	None		Max		Min		None
Walk Time (s)							7.0
Flash Dont Walk (s)							14.0
Pedestrian Calls (#/hr)							3
Act Effct Green (s)	30.9			34.4	22.9		
Actuated g/C Ratio	0.38			0.42	0.28		
v/c Ratio	0.78			1.21	0.87		
Control Delay	35.6			134.7	46.9		
Queue Delay	0.0			0.0	0.0		
Total Delay	35.6			134.7	46.9		
LOS	D			F	D		
Approach Delay	35.6			134.7	46.9		
Approach LOS	D			F	D		
Queue Length 50th (ft)	199			~249	189		
Queue Length 95th (ft)	#614			#774	#461		
Internal Link Dist (ft)	265			333	419		
Turn Bay Length (ft)							
Base Capacity (vph)	650			493	731		
Starvation Cap Reductn	0			0	0		
Spillback Cap Reductn	0			0	0		
Storage Cap Reductn	0			0	0		
Reduced v/c Ratio	0.78			1.21	0.61		

**Intersection Summary**

Area Type: Other  
 Cycle Length: 110.2  
 Actuated Cycle Length: 81.3  
 Natural Cycle: 150  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 1.21  
 Intersection Signal Delay: 77.0  
 Intersection LOS: E  
 Intersection Capacity Utilization 89.1%  
 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.

Splits and Phases: 26: Main St (RT 10) & Meadow Rd





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	7	12	5	48	68	3
Future Volume (vph)	7	12	5	48	68	3
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	0.916				0.995	
Flt Protected	0.981			0.996		
Satd. Flow (prot)	1674	0	0	1855	1853	0
Flt Permitted	0.981			0.996		
Satd. Flow (perm)	1674	0	0	1855	1853	0
Link Speed (mph)	25			30	30	
Link Distance (ft)	252			282	311	
Travel Time (s)	6.9			6.4	7.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	13	5	52	74	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	0	0	57	77	0
Sign Control	Stop			Free	Free	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	16.7%
Analysis Period (min)	15
	ICU Level of Service A

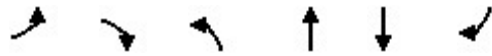
Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	12	5	48	68	3
Future Vol, veh/h	7	12	5	48	68	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	13	5	52	74	3

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	138	76	77	0	0
Stage 1	76	-	-	-	-
Stage 2	62	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	855	985	1522	-	-
Stage 1	947	-	-	-	-
Stage 2	961	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	852	985	1522	-	-
Mov Cap-2 Maneuver	852	-	-	-	-
Stage 1	944	-	-	-	-
Stage 2	961	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	0.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1522	-	931	-	-
HCM Lane V/C Ratio	0.004	-	0.022	-	-
HCM Control Delay (s)	7.4	0	9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 28: New Britain Ave & Coppermine Rd AM PEAK



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	25	9	122	151	7
Future Volume (vph)	10	25	9	122	151	7
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	0.904			0.994		
Flt Protected	0.986			0.997		
Satd. Flow (prot)	1660			1852		
Flt Permitted	0.986			0.997		
Satd. Flow (perm)	1660			1852		
Link Speed (mph)	20			30		
Link Distance (ft)	315			234		
Travel Time (s)	10.7			5.3		
Peak Hour Factor	0.92			0.92		
Adj. Flow (vph)	11			133		
Shared Lane Traffic (%)	27			164		
Lane Group Flow (vph)	38			172		
Sign Control	Stop			Free		

**Intersection Summary**

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 23.8% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	10	25	9	122	151	7
Future Vol, veh/h	10	25	9	122	151	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	27	10	133	164	8

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	321	168	172	0	0
Stage 1	168	-	-	-	-
Stage 2	153	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	673	876	1405	-	-
Stage 1	862	-	-	-	-
Stage 2	875	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	668	876	1405	-	-
Mov Cap-2 Maneuver	668	-	-	-	-
Stage 1	855	-	-	-	-
Stage 2	875	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.7	0.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1405	-	804	-	-
HCM Lane V/C Ratio	0.007	-	0.047	-	-
HCM Control Delay (s)	7.6	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 29: Whispering Rod Rd/Chaffee Ln & W District Rd AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	33	111	0	15	88	28	2	0	21	27	1	23
Future Volume (vph)	33	111	0	15	88	28	2	0	21	27	1	23
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	1.00	1.00	1.00	1.00	1.00
Frt					0.971			0.876			0.939	
Flt Protected		0.989			0.994			0.996			0.974	
Satd. Flow (prot)	0	1842	0	0	1798	0	0	1625	0	0	1704	0
Flt Permitted		0.989			0.994			0.996			0.974	
Satd. Flow (perm)	0	1842	0	0	1798	0	0	1625	0	0	1704	0
Link Speed (mph)		25			25			25			20	
Link Distance (ft)		304			314			232			240	
Travel Time (s)		8.3			8.6			6.3			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)	36	121	0	16	96	30	2	0	23	29	1	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	157	0	0	142	0	0	25	0	0	55	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	29.7%
Analysis Period (min)	15
	ICU Level of Service A

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	33	111	0	15	88	28	2	0	21	27	1	23
Future Vol, veh/h	33	111	0	15	88	28	2	0	21	27	1	23
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	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	121	0	16	96	30	2	0	23	29	1	25
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.3	8	7.3	7.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	23%	11%	53%
Vol Thru, %	0%	77%	67%	2%
Vol Right, %	91%	0%	21%	45%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	23	144	131	51
LT Vol	2	33	15	27
Through Vol	0	111	88	1
RT Vol	21	0	28	23
Lane Flow Rate	25	157	142	55
Geometry Grp	1	1	1	1
Degree of Util (X)	0.029	0.184	0.162	0.069
Departure Headway (Hd)	4.125	4.228	4.087	4.453
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	873	837	863	809
Service Time	2.128	2.313	2.18	2.455
HCM Lane V/C Ratio	0.029	0.188	0.165	0.068
HCM Control Delay	7.3	8.3	8	7.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.7	0.6	0.2

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 1: Canton Rd (RT 179) & Spielman Hwy (RT 4) PM Peak



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	366	445	537	457	308	445
Future Volume (vph)	366	445	537	457	308	445
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260	0	0			0
Storage Lanes	1	1	0			0
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	0.99	
Frt		0.850			0.920	
Flt Protected	0.950			0.974		
Satd. Flow (prot)	1787	1599	0	1832	1709	0
Flt Permitted	0.950			0.204		
Satd. Flow (perm)	1787	1599	0	384	1709	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		454			114	
Link Speed (mph)	35			50	50	
Link Distance (ft)	986			565	665	
Travel Time (s)	19.2			7.7	9.1	
Confl. Peds. (#/hr)			1			1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	373	454	548	466	314	454
Shared Lane Traffic (%)						
Lane Group Flow (vph)	373	454	0	1014	768	0
Number of Detectors	1	1	1	1	1	
Detector Template			Left			
Leading Detector (ft)	40	40	20	40	40	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	40	40	20	40	40	
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	pm+ov	D.P+P	NA	NA	
Protected Phases	4	1	1	12	2	
Permitted Phases		4	2			
Detector Phase	4	1	1	2	2	
Switch Phase						
Minimum Initial (s)	6.0	6.0	6.0		20.0	
Minimum Split (s)	17.0	10.0	10.0		26.6	
Total Split (s)	29.0	10.0	10.0		46.6	
Total Split (%)	33.9%	11.7%	11.7%		54.4%	
Maximum Green (s)	25.0	6.0	6.0		40.0	
Yellow Time (s)	3.0	3.0	3.0		5.0	
All-Red Time (s)	1.0	1.0	1.0		1.6	
Lost Time Adjust (s)	0.0	0.0			0.0	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 1: Canton Rd (RT 179) & Spielman Hwy (RT 4) PM Peak

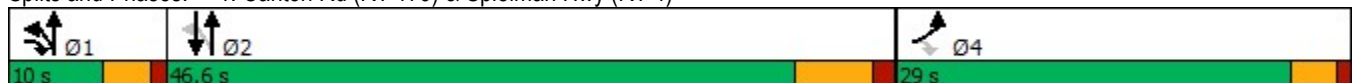


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Total Lost Time (s)	4.0	4.0			6.6	
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	1.0	3.0	3.0		5.0	
Recall Mode	None	Min	Min		Min	
Walk Time (s)	12.0					
Flash Dont Walk (s)	1.0					
Pedestrian Calls (#/hr)	1					
Act Effct Green (s)	19.4	29.5		48.8	40.2	
Actuated g/C Ratio	0.24	0.37		0.61	0.50	
v/c Ratio	0.86	0.52		2.96	0.84	
Control Delay	49.2	4.1		907.9	26.4	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	49.2	4.1		907.9	26.4	
LOS	D	A		F	C	
Approach Delay	24.4			907.9	26.4	
Approach LOS	C			F	C	
Queue Length 50th (ft)	179	0		~903	279	
Queue Length 95th (ft)	279	55		#1201	#566	
Internal Link Dist (ft)	906			485	585	
Turn Bay Length (ft)	260					
Base Capacity (vph)	558	874		342	911	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.67	0.52		2.96	0.84	

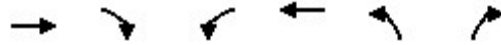
**Intersection Summary**

Area Type: Other  
 Cycle Length: 85.6  
 Actuated Cycle Length: 80.3  
 Natural Cycle: 150  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 2.96  
 Intersection Signal Delay: 368.4 Intersection LOS: F  
 Intersection Capacity Utilization 129.8% 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.

**Splits and Phases: 1: Canton Rd (RT 179) & Spielman Hwy (RT 4)**



Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 2: River Rd & Collinsville Rd (RT 4) PM Peak



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	610	73	415	615	100	474
Future Volume (vph)	610	73	415	615	100	474
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	60
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.986					0.850
Flt Protected				0.980	0.950	
Satd. Flow (prot)	1855	0	0	1844	1787	1599
Flt Permitted				0.980	0.950	
Satd. Flow (perm)	1855	0	0	1844	1787	1599
Link Speed (mph)	30			30	25	
Link Distance (ft)	740			816	860	
Travel Time (s)	16.8			18.5	23.5	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	622	74	423	628	102	484
Shared Lane Traffic (%)						
Lane Group Flow (vph)	696	0	0	1051	102	484
Sign Control	Free			Free	Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	107.4%
ICU Level of Service	G
Analysis Period (min)	15

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 2: River Rd & Collinsville Rd (RT 4) PM Peak

**Intersection**

Int Delay, s/veh 145.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	610	73	415	615	100	474
Future Vol, veh/h	610	73	415	615	100	474
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	60
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	622	74	423	628	102	484

**Major/Minor**

	Major1	Major2	Minor1		
Conflicting Flow All	0	0	696	0	2133 659
Stage 1	-	-	-	-	659 -
Stage 2	-	-	-	-	1474 -
Critical Hdwy	-	-	4.11	-	6.41 6.21
Critical Hdwy Stg 1	-	-	-	-	5.41 -
Critical Hdwy Stg 2	-	-	-	-	5.41 -
Follow-up Hdwy	-	-	2.209	-	3.509 3.309
Pot Cap-1 Maneuver	-	-	905	-	~ 55 ~ 465
Stage 1	-	-	-	-	516 -
Stage 2	-	-	-	-	211 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	905	-	~ 16 ~ 465
Mov Cap-2 Maneuver	-	-	-	-	~ 16 -
Stage 1	-	-	-	-	516 -
Stage 2	-	-	-	-	~ 60 -

**Approach**

	EB	WB	NB
HCM Control Delay, s	0	5	\$ 572.2
HCM LOS			F

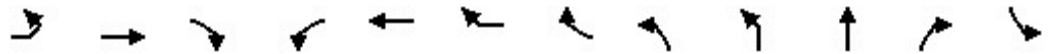
**Minor Lane/Major Mvmt**

	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	16	465	-	-	905	-
HCM Lane V/C Ratio	6.378	1.04	-	-	0.468	-
HCM Control Delay (s)	\$ 2892.4	82.7	-	-	12.4	0
HCM Lane LOS	F	F	-	-	B	A
HCM 95th %tile Q(veh)	13.6	14.7	-	-	2.5	-

**Notes**

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

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



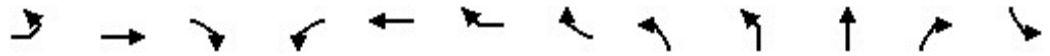
Lane Group	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL
Lane Configurations		↑↑			↑	↑			↑	↑	↑	↑
Traffic Volume (vph)	10	112	2	1	41	523	61	1	0	0	0	51
Future Volume (vph)	10	112	2	1	41	523	61	1	0	0	0	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)			50	0		0			0		145	110
Storage Lanes			1	0		1			1		1	1
Taper Length (ft)				25					25			50
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00							1.00
Frt		0.998				0.850						
Flt Protected		0.996			0.999				0.950			0.950
Satd. Flow (prot)	0	3517	0	0	1861	1583	0	0	1770	1863	1863	1770
Flt Permitted		0.938			0.995				0.754			0.757
Satd. Flow (perm)	0	3312	0	0	1853	1583	0	0	1405	1863	1863	1404
Right Turn on Red			No				No				Yes	
Satd. Flow (RTOR)												
Link Speed (mph)		25			30				25			
Link Distance (ft)		761			292				461			
Travel Time (s)		20.8			6.6				12.6			
Confl. Peds. (#/hr)			1	1							2	2
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	10	113	2	1	41	528	62	1	0	0	0	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	125	0	0	42	590	0	0	1	0	0	52
Number of Detectors	1	1		1	1	1		1	1	0	0	1
Detector Template	Left			Left				Left				
Leading Detector (ft)	20	44		20	44	44		20	44	0	0	44
Trailing Detector (ft)	0	-6		0	-6	-6		0	-6	0	0	-6
Detector 1 Position(ft)	0	-6		0	-6	-6		0	-6	0	0	-6
Detector 1 Size(ft)	20	50		20	50	50		20	50	6	20	50
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	NA	pt+ov		D.P+P	D.P+P		Free	Perm
Protected Phases		4			4	4.5		1	1	1.2		
Permitted Phases	4			4				2	2		Free	2
Detector Phase	4	4		4	4	4		1	1	2		2
Switch Phase												
Minimum Initial (s)	9.0	9.0		9.0	9.0			5.0	5.0			15.0
Minimum Split (s)	14.0	14.0		14.0	14.0			9.0	9.0			21.0
Total Split (s)	28.0	28.0		28.0	28.0			9.0	9.0			22.0
Total Split (%)	22.6%	22.6%		22.6%	22.6%			7.3%	7.3%			17.7%
Maximum Green (s)	23.0	23.0		23.0	23.0			5.0	5.0			16.0
Yellow Time (s)	4.0	4.0		4.0	4.0			3.0	3.0			4.0
All-Red Time (s)	1.0	1.0		1.0	1.0			1.0	1.0			2.0
Lost Time Adjust (s)		0.0			0.0				0.0			0.0
Total Lost Time (s)		5.0			5.0				4.0			6.0

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



Lane Group	SBT	SBR	SBR2	SEL2	SEL	SER	SER2	Ø3
Lane Configurations								
Traffic Volume (vph)	0	3	9	11	485	1	6	
Future Volume (vph)	0	3	9	11	485	1	6	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)		60			0	255		
Storage Lanes		1			1	1		
Taper Length (ft)					25			
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	
Ped Bike Factor					1.00			
Frt	0.850		0.850			0.850		
Flt Protected					0.950			
Satd. Flow (prot)	1504	0	1504	0	1770	1583	0	
Flt Permitted					0.984			
Satd. Flow (perm)	1504	0	1504	0	1831	1583	0	
Right Turn on Red			Yes				No	
Satd. Flow (RTOR)	132		185					
Link Speed (mph)	35				30			
Link Distance (ft)	785				820			
Travel Time (s)	15.3				18.6			
Confl. Peds. (#/hr)					2	1		
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Adj. Flow (vph)	0	3	9	11	490	1	6	
Shared Lane Traffic (%)			33%					
Lane Group Flow (vph)	6	0	6	0	501	7	0	
Number of Detectors	1		0	1	1	1		
Detector Template				Left				
Leading Detector (ft)	206		0	20	44	44		
Trailing Detector (ft)	200		0	0	-6	-6		
Detector 1 Position(ft)	200		0	0	-6	-6		
Detector 1 Size(ft)	6		20	20	50	50		
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	NA		Free	D.Pm	Prot	Prot		
Protected Phases	2				5	5	3	
Permitted Phases			Free	5				
Detector Phase	2			5	5	5		
Switch Phase								
Minimum Initial (s)	15.0			9.0	9.0	9.0	1.0	
Minimum Split (s)	21.0			14.0	14.0	14.0	23.0	
Total Split (s)	22.0			42.0	42.0	42.0	23.0	
Total Split (%)	17.7%			33.9%	33.9%	33.9%	19%	
Maximum Green (s)	16.0			37.0	37.0	37.0	19.0	
Yellow Time (s)	4.0			4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0			1.0	1.0	1.0	0.0	
Lost Time Adjust (s)	0.0				0.0	0.0		
Total Lost Time (s)	6.0				5.0	5.0		

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)

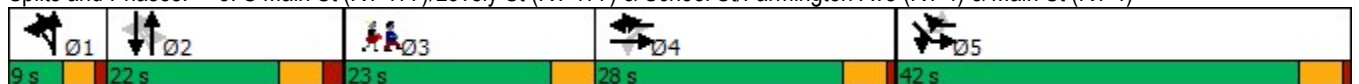


Lane Group	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL
Lead/Lag	Lag	Lag		Lag	Lag			Lead	Lead			Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes			Yes	Yes			Yes
Vehicle Extension (s)	1.5	1.5		1.5	1.5			1.5	1.5			2.5
Recall Mode	None	None		None	None			None	None			Min
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		19.5			19.5	52.7			18.6			15.8
Actuated g/C Ratio		0.23			0.23	0.62			0.22			0.19
v/c Ratio		0.16			0.10	0.60			0.00			0.20
Control Delay		30.4			31.6	14.6			34.0			39.0
Queue Delay		0.0			0.0	0.0			0.0			0.0
Total Delay		30.4			31.6	14.6			34.0			39.0
LOS		C			C	B			C			D
Approach Delay		30.4			15.8					34.0		
Approach LOS		C			B					C		
Queue Length 50th (ft)		25			16	131			0			22
Queue Length 95th (ft)		73			62	483			6			80
Internal Link Dist (ft)		681			212					381		
Turn Bay Length (ft)												110
Base Capacity (vph)		948			531	981			331			279
Starvation Cap Reductn		0			0	0			0			0
Spillback Cap Reductn		0			0	0			0			0
Storage Cap Reductn		0			0	0			0			0
Reduced v/c Ratio		0.13			0.08	0.60			0.00			0.19

Intersection Summary

Area Type: Other  
 Cycle Length: 124  
 Actuated Cycle Length: 84.5  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.83  
 Intersection Signal Delay: 27.4      Intersection LOS: C  
 Intersection Capacity Utilization 60.8%      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.

Splits and Phases: 3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)

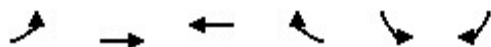


Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



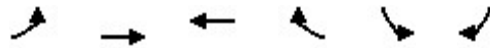
Lane Group	SBT	SBR	SBR2	SEL2	SEL	SER	SER2	Ø3
Lead/Lag	Lag							Lead
Lead-Lag Optimize?	Yes							Yes
Vehicle Extension (s)	2.5		1.5		1.5	1.5		3.0
Recall Mode	Min		None		None	None		None
Walk Time (s)								7.0
Flash Dont Walk (s)								12.0
Pedestrian Calls (#/hr)								3
Act Effct Green (s)	15.8	84.5		27.9	27.9			
Actuated g/C Ratio	0.19	1.00		0.33	0.33			
v/c Ratio	0.02	0.00		0.83	0.01			
Control Delay	0.0	0.0		40.9	24.0			
Queue Delay	0.0	0.0		0.0	0.0			
Total Delay	0.0	0.0		40.9	24.0			
LOS	A	A		D	C			
Approach Delay	31.7			40.6				
Approach LOS	C			D				
Queue Length 50th (ft)	0	0		214	2			
Queue Length 95th (ft)	0	0		#586	16			
Internal Link Dist (ft)	705			740				
Turn Bay Length (ft)		60			255			
Base Capacity (vph)	405	1504		843	729			
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	0.00		0.59	0.01			
<b>Intersection Summary</b>								

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 4: Farmington Ave (RT 4) & W Avon Rd (RT 167) PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3
Lane Configurations							
Traffic Volume (vph)	159	664	624	88	70	212	
Future Volume (vph)	159	664	624	88	70	212	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	365			0	0	0	
Storage Lanes	1			0	1	0	
Taper Length (ft)	50				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt			0.983		0.898		
Flt Protected	0.950				0.988		
Satd. Flow (prot)	1787	1881	1849	0	1669	0	
Flt Permitted	0.210				0.988		
Satd. Flow (perm)	395	1881	1849	0	1669	0	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			7		98		
Link Speed (mph)		30	35		30		
Link Distance (ft)		1079	965		1192		
Travel Time (s)		24.5	18.8		27.1		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	
Adj. Flow (vph)	162	678	637	90	71	216	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	162	678	727	0	287	0	
Number of Detectors	1	2	2		1		
Detector Template							
Leading Detector (ft)	24	246	246		24		
Trailing Detector (ft)	-6	120	120		-6		
Detector 1 Position(ft)	-6	120	120		-6		
Detector 1 Size(ft)	30	6	6		30		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		
Detector 2 Position(ft)		240	240				
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.P+P	NA	NA		Prot		
Protected Phases	1	1 2	2		4		3
Permitted Phases	2						
Detector Phase	1	2	2		4		
Switch Phase							
Minimum Initial (s)	5.0		15.0		7.0		1.0
Minimum Split (s)	9.5		22.5		22.5		23.0
Total Split (s)	19.0		65.5		27.0		23.0
Total Split (%)	14.1%		48.7%		20.1%		17%
Maximum Green (s)	15.0		60.0		23.0		19.0

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 4: Farmington Ave (RT 4) & W Avon Rd (RT 167) PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3
Yellow Time (s)	3.0		4.0		3.0		4.0
All-Red Time (s)	1.0		1.5		1.0		0.0
Lost Time Adjust (s)	0.0		0.0		0.0		
Total Lost Time (s)	4.0		5.5		4.0		
Lead/Lag	Lead		Lag		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	1.5		2.5		2.0		3.0
Recall Mode	None		Min		None		None
Walk Time (s)							7.0
Flash Dont Walk (s)							11.0
Pedestrian Calls (#/hr)							0
Act Effct Green (s)	53.1	57.4	43.6		16.3		
Actuated g/C Ratio	0.64	0.70	0.53		0.20		
v/c Ratio	0.42	0.52	0.74		0.70		
Control Delay	8.0	7.7	20.8		32.5		
Queue Delay	0.0	0.0	0.0		0.0		
Total Delay	8.0	7.7	20.8		32.5		
LOS	A	A	C		C		
Approach Delay		7.8	20.8		32.5		
Approach LOS		A	C		C		
Queue Length 50th (ft)	24	141	260		90		
Queue Length 95th (ft)	51	259	504		218		
Internal Link Dist (ft)		999	885		1112		
Turn Bay Length (ft)	365						
Base Capacity (vph)	547	1628	1388		571		
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	0.30	0.42	0.52		0.50		

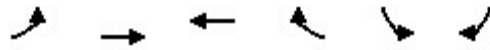
**Intersection Summary**

Area Type:	Other
Cycle Length:	134.5
Actuated Cycle Length:	82.4
Natural Cycle:	100
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.74
Intersection Signal Delay:	16.7
Intersection LOS:	B
Intersection Capacity Utilization	75.2%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 4: Farmington Ave (RT 4) & W Avon Rd (RT 167)

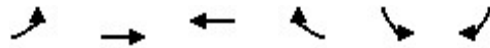


Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 5: Farmington Ave (RT 4) & Monteith Dr PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø2	Ø3
Lane Configurations								
Traffic Volume (vph)	197	736	683	147	85	93		
Future Volume (vph)	197	736	683	147	85	93		
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			0.976			0.850		
Flt Protected		0.990			0.950			
Satd. Flow (prot)	0	1881	1854	0	1805	1615		
Flt Permitted		0.542			0.950			
Satd. Flow (perm)	0	1030	1854	0	1805	1615		
Right Turn on Red				Yes		Yes		
Satd. Flow (RTOR)			23			106		
Link Speed (mph)		35	35		25			
Link Distance (ft)		784	925		548			
Travel Time (s)		15.3	18.0		14.9			
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88		
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%		
Adj. Flow (vph)	224	836	776	167	97	106		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	1060	943	0	97	106		
Number of Detectors	1	0	1		3	3		
Detector Template	Left							
Leading Detector (ft)	20	0	356		24	24		
Trailing Detector (ft)	0	0	350		-6	-6		
Detector 1 Position(ft)	0	0	350		-6	-6		
Detector 1 Size(ft)	20	6	6		6	6		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		
Detector 2 Position(ft)					6	6		
Detector 2 Size(ft)					6	6		
Detector 2 Type					Cl+Ex	Cl+Ex		
Detector 2 Channel								
Detector 2 Extend (s)					0.0	0.0		
Detector 3 Position(ft)					18	18		
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	D.P+P	NA	NA		Prot	Perm		
Protected Phases	1	1 2 3	2 3		4		2	3
Permitted Phases	2 3					4		
Detector Phase	1	2	2		4	4		
Switch Phase								
Minimum Initial (s)	5.0				7.0	7.0	15.0	1.0
Minimum Split (s)	9.0				16.0	16.0	20.4	7.5
Total Split (s)	9.0				20.0	20.0	63.0	8.0

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 5: Farmington Ave (RT 4) & Monteith Dr PM Peak



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø2	Ø3
Total Split (%)	9.0%				20.0%	20.0%	63%	8%
Maximum Green (s)	5.0				16.0	16.0	57.6	1.5
Yellow Time (s)	3.0				3.0	3.0	4.4	4.4
All-Red Time (s)	1.0				1.0	1.0	1.0	2.1
Lost Time Adjust (s)					0.0	0.0		
Total Lost Time (s)					4.0	4.0		
Lead/Lag	Lead				Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes				Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0				1.5	1.5	3.0	3.0
Recall Mode	None				None	None	C-Max	None
Walk Time (s)					11.0	11.0		
Flash Dont Walk (s)					1.0	1.0		
Pedestrian Calls (#/hr)					0	0		
Act Effct Green (s)		82.3	80.9		9.7	9.7		
Actuated g/C Ratio		0.82	0.81		0.10	0.10		
v/c Ratio		1.25	0.63		0.55	0.42		
Control Delay		138.5	6.2		54.6	13.4		
Queue Delay		0.0	0.0		0.0	0.0		
Total Delay		138.5	6.2		54.6	13.4		
LOS		F	A		D	B		
Approach Delay		138.5	6.2		33.1			
Approach LOS		F	A		C			
Queue Length 50th (ft)		~847	165		60	0		
Queue Length 95th (ft)		#1082	307		106	45		
Internal Link Dist (ft)		704	845		468			
Turn Bay Length (ft)								
Base Capacity (vph)		847	1503		288	347		
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		1.25	0.63		0.34	0.31		

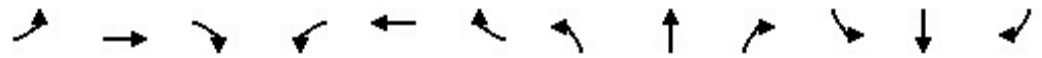
Intersection Summary

Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 10 (10%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.25  
 Intersection Signal Delay: 72.3 Intersection LOS: E  
 Intersection Capacity Utilization 111.5% 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.

Splits and Phases: 5: Farmington Ave (RT 4) & Monteith Dr



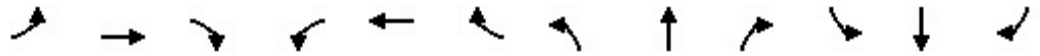
Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4) PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	816	42	55	733	287	59	37	66	315	26	99
Future Volume (vph)	101	816	42	55	733	287	59	37	66	315	26	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90		0	90		90	0		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	65			110			25			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00				0.98		1.00		
Frt		0.993				0.850		0.904				0.881
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1848	0	1770	1863	1583	1770	1655	0	1770	1641	0
Flt Permitted	0.092			0.089			0.525			0.675		
Satd. Flow (perm)	171	1848	0	166	1863	1583	978	1655	0	1255	1641	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				175		57			104	
Link Speed (mph)		40			40			30			35	
Link Distance (ft)		635			779			428			768	
Travel Time (s)		10.8			13.3			9.7			15.0	
Confl. Peds. (#/hr)			1	1					1	1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	106	859	44	58	772	302	62	39	69	332	27	104
Shared Lane Traffic (%)												
Lane Group Flow (vph)	106	903	0	58	772	302	62	108	0	332	131	0
Number of Detectors	1	2		1	2	0	1	1		1	1	
Detector Template												
Leading Detector (ft)	45	342		45	342	0	55	50		50	60	
Trailing Detector (ft)	-5	190		-5	190	0	-5	-10		-10	-10	
Detector 1 Position(ft)	-5	190		-5	190	0	-5	-10		-10	-10	
Detector 1 Size(ft)	50	6		50	6	20	60	60		60	70	
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)		336			336							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA		pm+pt	NA	Prot	pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2	2	7	8		7	8	
Permitted Phases	6			2			8			8		
Detector Phase	1	6		5	2	2	7	8		7	8	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	5.0	7.0		5.0	7.0	
Minimum Split (s)	10.4	22.0		10.4	22.0	22.0	11.0	14.0		11.0	14.0	
Total Split (s)	15.0	46.0		15.0	46.0	46.0	29.0	16.0		29.0	16.0	
Total Split (%)	12.5%	38.3%		12.5%	38.3%	38.3%	24.2%	13.3%		24.2%	13.3%	

Lane Group	Ø9
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	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
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	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	5.0
Total Split (s)	14.0
Total Split (%)	12%

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4) PM Peak

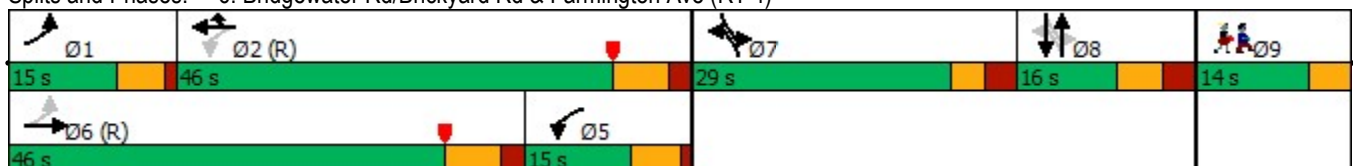


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	9.6	39.0		9.6	39.0	39.0	23.1	9.0		23.1	9.0	
Yellow Time (s)	4.4	5.0		4.4	5.0	5.0	3.0	4.1		3.0	4.1	
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	2.9	2.9		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	7.0		5.4	7.0	7.0	5.9	7.0		5.9	7.0	
Lead/Lag	Lead	Lead		Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effect Green (s)	57.4	55.8		55.8	54.2	54.2	30.6	8.1		30.6	8.1	
Actuated g/C Ratio	0.48	0.46		0.46	0.45	0.45	0.26	0.07		0.26	0.07	
v/c Ratio	0.55	1.05		0.30	0.92	0.37	0.16	0.66		0.81	0.63	
Control Delay	32.9	77.8		38.6	49.3	11.8	30.2	46.7		51.8	29.9	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	32.9	77.8		38.6	49.3	11.8	30.2	46.7		51.8	29.9	
LOS	C	E		D	D	B	C	D		D	C	
Approach Delay		73.1			38.8			40.7			45.6	
Approach LOS		E			D			D			D	
Queue Length 50th (ft)	46	~792		24	546	57	34	39		214	20	
Queue Length 95th (ft)	103	#1230		62	#995	158	67	#107		310	85	
Internal Link Dist (ft)		555			699			348			688	
Turn Bay Length (ft)	90			90		90				150		
Base Capacity (vph)	210	860		205	841	811	414	176		435	219	
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	0.50	1.05		0.28	0.92	0.37	0.15	0.61		0.76	0.60	

Intersection Summary

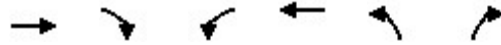
Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 16 (13%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.05  
 Intersection Signal Delay: 52.5 Intersection LOS: D  
 Intersection Capacity Utilization 94.3% 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.

Splits and Phases: 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)



Lane Group	Ø9
Maximum Green (s)	10.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
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)	16.0
Pedestrian Calls (#/hr)	2
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 7: Garden St & Farmington Ave (RT 4) PM Peak



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø4
Lane Configurations	↑↑		↙	↑	↘			
Traffic Volume (vph)	1359	137	15	937	132	17		
Future Volume (vph)	1359	137	15	937	132	17		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)		0	200		0	0		
Storage Lanes		0	1		1	0		
Taper Length (ft)			50		25			
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00		
Ped Bike Factor	1.00		1.00		0.98			
Frt	0.986				0.985			
Flt Protected			0.950		0.958			
Satd. Flow (prot)	3516	0	1787	1881	1775	0		
Flt Permitted			0.114		0.958			
Satd. Flow (perm)	3516	0	214	1881	1747	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)	12				4			
Link Speed (mph)	30			30	25			
Link Distance (ft)	1042			566	488			
Travel Time (s)	23.7			12.9	13.3			
Confl. Peds. (#/hr)		6	6		5			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%		
Adj. Flow (vph)	1446	146	16	997	140	18		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	1592	0	16	997	158	0		
Number of Detectors	0		0	0	3			
Detector Template								
Leading Detector (ft)	0		0	0	24			
Trailing Detector (ft)	0		0	0	-6			
Detector 1 Position(ft)	0		0	0	-6			
Detector 1 Size(ft)	6		20	6	6			
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel								
Detector 1 Extend (s)	0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0		0.0	0.0	0.0			
Detector 2 Position(ft)					6			
Detector 2 Size(ft)					6			
Detector 2 Type					Cl+Ex			
Detector 2 Channel								
Detector 2 Extend (s)					0.0			
Detector 3 Position(ft)					18			
Detector 3 Size(ft)					6			
Detector 3 Type					Cl+Ex			
Detector 3 Channel								
Detector 3 Extend (s)					0.0			
Turn Type	NA		Perm	NA	Prot			
Protected Phases	2 4			2	5		3	4
Permitted Phases			2					

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 7: Garden St & Farmington Ave (RT 4) PM Peak

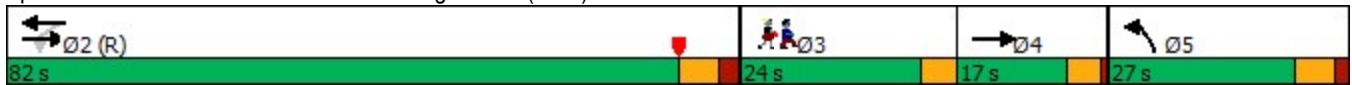


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø4
Detector Phase	2		2	2	5			
Switch Phase								
Minimum Initial (s)			15.0	15.0	7.0		7.0	6.0
Minimum Split (s)			22.1	22.1	13.3		24.0	10.8
Total Split (s)			82.0	82.0	27.0		24.0	17.0
Total Split (%)			54.7%	54.7%	18.0%		16%	11%
Maximum Green (s)			74.9	74.9	20.7		20.0	12.2
Yellow Time (s)			4.6	4.6	4.5		4.0	3.8
All-Red Time (s)			2.5	2.5	1.8		0.0	1.0
Lost Time Adjust (s)			0.0	0.0	0.0			
Total Lost Time (s)			7.1	7.1	6.3			
Lead/Lag							Lead	Lag
Lead-Lag Optimize?							Yes	Yes
Vehicle Extension (s)			3.0	3.0	1.5		3.0	1.5
Recall Mode			C-Max	C-Max	None		None	None
Walk Time (s)							7.0	
Flash Dont Walk (s)							13.0	
Pedestrian Calls (#/hr)							11	
Act Effct Green (s)	110.0		110.0	110.0	17.0			
Actuated g/C Ratio	0.73		0.73	0.73	0.11			
v/c Ratio	0.62		0.10	0.72	0.77			
Control Delay	13.9		8.6	12.0	86.7			
Queue Delay	0.3		0.0	3.3	0.0			
Total Delay	14.2		8.6	15.2	86.7			
LOS	B		A	B	F			
Approach Delay	14.2			15.1	86.7			
Approach LOS	B			B	F			
Queue Length 50th (ft)	257		3	165	149			
Queue Length 95th (ft)	673		m3	m172	220			
Internal Link Dist (ft)	962			486	408			
Turn Bay Length (ft)			200					
Base Capacity (vph)	2582		157	1379	255			
Starvation Cap Reductn	0		0	278	0			
Spillback Cap Reductn	377		0	0	0			
Storage Cap Reductn	0		0	0	0			
Reduced v/c Ratio	0.72		0.10	0.91	0.62			

**Intersection Summary**

Area Type: Other  
 Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 30 (20%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 130  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 18.7 Intersection LOS: B  
 Intersection Capacity Utilization 68.8% ICU Level of Service C  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Garden St & Farmington Ave (RT 4)



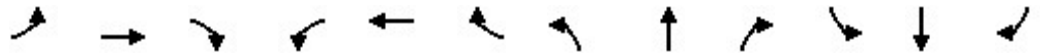
Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4) PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1064	283	90	740	91	238	167	90	225	206	10
Future Volume (vph)	1	1064	283	90	740	91	238	167	90	225	206	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	255		0	100		50	0		0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (ft)	65			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor							0.99					1.00
Frt			0.850		0.984				0.850			0.997
Flt Protected	0.950			0.950			0.950					0.975
Satd. Flow (prot)	1787	3574	1599	1787	1851	0	1787	1881	1599	0	1827	0
Flt Permitted	0.089			0.080			0.950					0.975
Satd. Flow (perm)	167	3574	1599	150	1851	0	1775	1881	1599	0	1827	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30				30
Link Distance (ft)		566			848			677				693
Travel Time (s)		12.9			19.3			15.4				15.8
Confl. Peds. (#/hr)							2					2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	1	1086	289	92	755	93	243	170	92	230	210	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	1086	289	92	848	0	243	170	92	0	450	0
Number of Detectors	3	3	4	1	1		3	3	2	1	2	
Detector Template										Left		
Leading Detector (ft)	30	30	36	34	34		30	30	48	20	48	
Trailing Detector (ft)	0	0	-6	0	0		0	0	0	0	-6	
Detector 1 Position(ft)	0	0	-6	0	0		0	0	0	0	-6	
Detector 1 Size(ft)	6	6	6	34	34		6	6	12	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	12	12	6				12	12	18		6	
Detector 2 Size(ft)	6	6	6				6	6	30		42	
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0	0.0				0.0	0.0	0.0		0.0	
Detector 3 Position(ft)	24	24	18				24	24				
Detector 3 Size(ft)	6	6	6				6	6				
Detector 3 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex				
Detector 3 Channel												
Detector 3 Extend (s)	0.0	0.0	0.0				0.0	0.0				
Detector 4 Position(ft)			30									
Detector 4 Size(ft)			6									
Detector 4 Type			Cl+Ex									

Lane Group	Ø3
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)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Detector 4 Position(ft)	
Detector 4 Size(ft)	
Detector 4 Type	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4) PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 4 Channel												
Detector 4 Extend (s)	0.0											
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Split	NA	pt+ov	Split	NA	
Protected Phases	1	6		5	2		7	7	5 7	4	4	
Permitted Phases	6		6	2								
Detector Phase	1	6	6	5	2		7	7	7	4	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	7.0	20.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	9.5	27.3	27.3	12.0	27.3		13.0	13.0		22.5	22.5	
Total Split (s)	15.0	54.0	54.0	15.0	54.0		23.0	23.0		34.0	34.0	
Total Split (%)	10.0%	36.0%	36.0%	10.0%	36.0%		15.3%	15.3%		22.7%	22.7%	
Maximum Green (s)	11.0	46.7	46.7	10.0	46.7		17.0	17.0		28.3	28.3	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	2.8	2.8	2.0	2.8		3.0	3.0		2.7	2.7	
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	7.3	7.3	5.0	7.3		6.0	6.0				5.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag					Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None		None	None	
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										5.0	5.0	
Pedestrian Calls (#/hr)										2	2	
Act Effct Green (s)	56.4	48.1	48.1	64.0	59.9		17.6	17.6	32.2			46.9
Actuated g/C Ratio	0.38	0.32	0.32	0.43	0.40		0.12	0.12	0.21			0.31
v/c Ratio	0.01	0.95	0.56	0.59	1.15		1.16	0.77	0.27			0.79
Control Delay	12.0	52.2	33.4	48.2	121.5		167.6	86.4	51.0			57.8
Queue Delay	0.0	11.7	0.0	0.0	0.0		5.1	0.0	0.0			0.0
Total Delay	12.0	64.0	33.4	48.2	121.5		172.6	86.4	51.0			57.8
LOS	B	E	C	D	F		F	F	D			E
Approach Delay		57.5			114.3			121.4				57.8
Approach LOS		E			F			F				E
Queue Length 50th (ft)	1	547	236	61	~970		~282	164	76			382
Queue Length 95th (ft)	m1	#706	287	m102	#1313		#468	#287	130			#784
Internal Link Dist (ft)		486			768			597				613
Turn Bay Length (ft)	100		150	255			100		50			
Base Capacity (vph)	188	1146	512	173	739		210	221	343			570
Starvation Cap Reductn	0	74	0	0	0		0	0	0			0
Spillback Cap Reductn	0	0	0	0	0		55	0	0			0
Storage Cap Reductn	0	0	0	0	0		0	0	0			0
Reduced v/c Ratio	0.01	1.01	0.56	0.53	1.15		1.57	0.77	0.27			0.79

**Intersection Summary**

Area Type: Other  
 Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 30 (20%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated

Lane Group	Ø3
Detector 4 Channel	
Detector 4 Extend (s)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	25.0
Total Split (s)	24.0
Total Split (%)	16%
Maximum Green (s)	20.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	13.0
Pedestrian Calls (#/hr)	2
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4) PM Peak

Maximum v/c Ratio: 1.16

Intersection Signal Delay: 83.7 Intersection LOS: F

Intersection Capacity Utilization 104.9% ICU Level of Service G








Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.

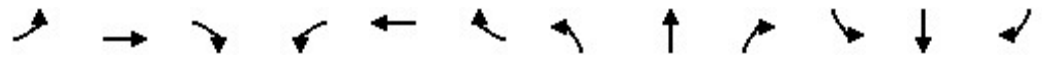
# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

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

Splits and Phases: 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4)

 Ø1 15 s	 Ø2 (R) 54 s	 Ø3 24 s	 Ø4 34 s	 Ø7 23 s
 Ø5 15 s	 Ø6 (R) 54 s			

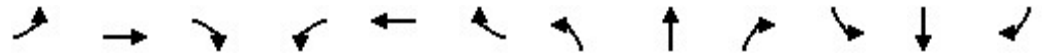
Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 9: High St/Backage Rd & Farmington Ave (RT 4) PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	1321	49	44	870	5	87	1	70	6	3	4
Future Volume (vph)	7	1321	49	44	870	5	87	1	70	6	3	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	85		100	115		0	0		85	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	70			115			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			0.99	
Frt		0.995			0.999				0.850		0.958	
Flt Protected	0.950			0.950				0.953			0.977	
Satd. Flow (prot)	1770	3522	0	1770	1861	0	0	1775	1583	0	1729	0
Flt Permitted	0.222			0.135							0.974	
Satd. Flow (perm)	414	3522	0	251	1861	0	0	1856	1583	0	1721	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		4							85			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		848			473			291			375	
Travel Time (s)		19.3			10.8			6.6			8.5	
Confl. Peds. (#/hr)							1		1	1		1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	7	1376	51	46	906	5	91	1	73	6	3	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	1427	0	46	911	0	0	92	73	0	13	0
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template							Left			Left		
Leading Detector (ft)	40	40		25	25		20	35	35	20	30	
Trailing Detector (ft)	0	0		-10	-10		0	0	0	0	0	
Detector 1 Position(ft)	0	0		-10	-10		0	0	0	0	0	
Detector 1 Size(ft)	40	40		35	35		20	35	35	20	30	
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	pm+pt	NA		pm+pt	NA		D.P+P	NA	Prot	Perm	NA	
Protected Phases	1	6		5	2		4	4 7	4 7		7	
Permitted Phases	6			2			7			7		
Detector Phase	1	6		5	2		4	4	4	7	7	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		7.0			7.0	7.0	
Minimum Split (s)	9.0	21.7		9.0	21.7		11.7			12.0	12.0	
Total Split (s)	13.0	83.0		13.0	83.0		14.0			16.0	16.0	
Total Split (%)	8.7%	55.3%		8.7%	55.3%		9.3%			10.7%	10.7%	
Maximum Green (s)	9.0	76.3		9.0	76.3		9.3			11.0	11.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0			3.0	3.0	
All-Red Time (s)	1.0	2.2		1.0	2.2		1.7			2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	
Total Lost Time (s)	4.0	6.7		4.0	6.7						5.0	

Lane Group	Ø3
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	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	24.0
Total Split (s)	24.0
Total Split (%)	16%
Maximum Green (s)	20.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 9: High St/Backage Rd & Farmington Ave (RT 4) PM Peak

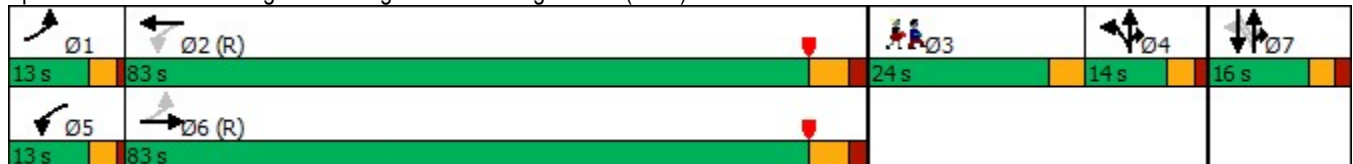


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lead	Lag		Lead	Lag		Lag					
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes					
Vehicle Extension (s)	1.5	2.0		1.5	2.0		2.0			2.0	2.0	
Recall Mode	None	C-Min		None	C-Min		None			None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	117.7	111.0		121.0	116.9		15.1	15.1			7.2	
Actuated g/C Ratio	0.78	0.74		0.81	0.78		0.10	0.10			0.05	
v/c Ratio	0.02	0.55		0.18	0.63		0.49	0.31			0.16	
Control Delay	5.0	21.7		7.1	14.0		71.0	11.3			72.8	
Queue Delay	0.0	0.4		0.0	0.0		0.0	0.0			0.0	
Total Delay	5.0	22.2		7.1	14.0		71.0	11.3			72.8	
LOS	A	C		A	B		E	B			E	
Approach Delay		22.1			13.7		44.6				72.8	
Approach LOS		C			B		D				E	
Queue Length 50th (ft)	2	598		5	219		89	0			13	
Queue Length 95th (ft)	m1	m277		33	#1004		140	37			37	
Internal Link Dist (ft)		768			393		211				295	
Turn Bay Length (ft)	85			115				85				
Base Capacity (vph)	414	2606		294	1450		192	240			126	
Starvation Cap Reductn	0	621		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	0.02	0.72		0.16	0.63		0.48	0.30			0.10	

Intersection Summary

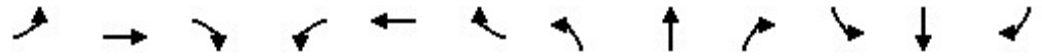
Area Type: Other  
 Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 45 (30%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.63  
 Intersection Signal Delay: 20.6 Intersection LOS: C  
 Intersection Capacity Utilization 64.8% 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: 9: High St/Backage Rd & Farmington Ave (RT 4)



Lane Group	Ø3
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	13.0
Pedestrian Calls (#/hr)	4
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	

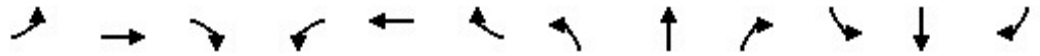
Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	10	9	7	57	2	96	3	448	53	56	515	39
Future Volume (vph)	10	9	7	57	2	96	3	448	53	56	515	39
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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00							
Frt		0.963			0.916			0.986			0.991	
Flt Protected		0.981			0.982						0.995	
Satd. Flow (prot)	0	1766	0	0	1692	0	0	1855	0	0	1855	0
Flt Permitted		0.892			0.867			0.996			0.938	
Satd. Flow (perm)	0	1606	0	0	1493	0	0	1847	0	0	1749	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			65			6			4	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		360			802			2590			707	
Travel Time (s)		8.2			18.2			44.1			12.1	
Confl. Peds. (#/hr)			1	1								
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	11	10	8	63	2	107	3	498	59	62	572	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	29	0	0	172	0	0	560	0	0	677	0
Number of Detectors	1	1		1	1		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	22		20	22		20	206		20	206	
Trailing Detector (ft)	0	-10		0	-10		0	100		0	100	
Detector 1 Position(ft)	0	-10		0	-10		0	100		0	100	
Detector 1 Size(ft)	20	32		20	32		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)								200			200	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		D.P+P	NA	
Protected Phases		4			4			2		1	12	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		1	1	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0		5.0		
Minimum Split (s)	12.0	12.0		12.0	12.0		21.6	21.6		9.0		
Total Split (s)	30.0	30.0		30.0	30.0		51.6	51.6		12.0		
Total Split (%)	26.0%	26.0%		26.0%	26.0%		44.6%	44.6%		10.4%		
Maximum Green (s)	25.0	25.0		25.0	25.0		45.0	45.0		8.0		
Yellow Time (s)	3.3	3.3		3.3	3.3		4.2	4.2		3.0		

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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)	
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	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	22.0
Total Split (s)	22.0
Total Split (%)	19%
Maximum Green (s)	18.0
Yellow Time (s)	4.0

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	1.7	1.7		1.7	1.7		2.4	2.4		1.0		
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.0			5.0			6.6				
Lead/Lag	Lag	Lag		Lag	Lag		Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes		
Vehicle Extension (s)	1.5	1.5		1.5	1.5		2.5	2.5		3.0		
Recall Mode	None	None		None	None		Min	Min		None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		10.6			10.6			23.5				35.3
Actuated g/C Ratio		0.17			0.17			0.37				0.56
v/c Ratio		0.10			0.56			0.81				0.68
Control Delay		24.4			26.4			28.6				14.5
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		24.4			26.4			28.6				14.5
LOS		C			C			C				B
Approach Delay		24.4			26.4			28.6				14.5
Approach LOS		C			C			C				B
Queue Length 50th (ft)		5			30			147				89
Queue Length 95th (ft)		39			140			461				459
Internal Link Dist (ft)		280			722			2510				627
Turn Bay Length (ft)												
Base Capacity (vph)		713			695			1468				998
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		0.04			0.25			0.38				0.68

**Intersection Summary**

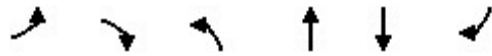
Area Type:	Other
Cycle Length:	115.6
Actuated Cycle Length:	62.9
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.81
Intersection Signal Delay:	21.6
Intersection LOS:	C
Intersection Capacity Utilization:	84.2%
ICU Level of Service:	E
Analysis Period (min):	15

**Splits and Phases: 10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd**



Lane Group	Ø3
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	1
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 11: Harris Rd/W Avon Rd (RT 167) & W Avon Rd (RT167) PM Peak



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	157	42	67	311	339	259
Future Volume (vph)	157	42	67	311	339	259
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	0.971			0.941		
Flt Protected	0.962			0.991		
Satd. Flow (prot)	1775	0	0	1883	1788	0
Flt Permitted	0.962			0.991		
Satd. Flow (perm)	1775	0	0	1883	1788	0
Link Speed (mph)	40			30	40	
Link Distance (ft)	781			809	2590	
Travel Time (s)	13.3			18.4	44.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	171	46	73	338	368	282
Shared Lane Traffic (%)						
Lane Group Flow (vph)	217	0	0	411	650	0
Sign Control	Stop			Stop	Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	75.0% <span style="float: right;">ICU Level of Service D</span>
Analysis Period (min)	15

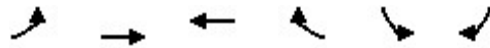
Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 11: Harris Rd/W Avon Rd (RT 167) & W Avon Rd (RT167) PM Peak

Intersection	
Intersection Delay, s/veh	26.4
Intersection LOS	D

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	157	42	67	311	339	259
Future Vol, veh/h	157	42	67	311	339	259
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	171	46	73	338	368	282
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	13.6	17.8	36
HCM LOS	B	C	E

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	18%	79%	0%
Vol Thru, %	82%	0%	57%
Vol Right, %	0%	21%	43%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	378	199	598
LT Vol	67	157	0
Through Vol	311	0	339
RT Vol	0	42	259
Lane Flow Rate	411	216	650
Geometry Grp	1	1	1
Degree of Util (X)	0.633	0.389	0.9
Departure Headway (Hd)	5.546	6.471	4.987
Convergence, Y/N	Yes	Yes	Yes
Cap	649	554	722
Service Time	3.602	4.536	3.036
HCM Lane V/C Ratio	0.633	0.39	0.9
HCM Control Delay	17.8	13.6	36
HCM Lane LOS	C	B	E
HCM 95th-tile Q	4.5	1.8	11.7



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	158	122	208	94	49	166
Future Volume (vph)	158	122	208	94	49	166
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			0.958		0.896	
Flt Protected		0.973			0.989	
Satd. Flow (prot)	0	1849	1820	0	1684	0
Flt Permitted		0.973			0.989	
Satd. Flow (perm)	0	1849	1820	0	1684	0
Link Speed (mph)		30	30		25	
Link Distance (ft)		546	304		789	
Travel Time (s)		12.4	6.9		21.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	176	136	231	104	54	184
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	312	335	0	238	0
Sign Control		Free	Free		Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	54.8%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	5.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↔		↕	
Traffic Vol, veh/h	158	122	208	94	49	166
Future Vol, veh/h	158	122	208	94	49	166
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	176	136	231	104	54	184

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	335	0	-	0	771 283
Stage 1	-	-	-	-	283 -
Stage 2	-	-	-	-	488 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1236	-	-	-	371 761
Stage 1	-	-	-	-	770 -
Stage 2	-	-	-	-	621 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1236	-	-	-	314 761
Mov Cap-2 Maneuver	-	-	-	-	314 -
Stage 1	-	-	-	-	651 -
Stage 2	-	-	-	-	621 -

Approach	EB	WB	SB
HCM Control Delay, s	4.7	0	15.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1236	-	-	-	575
HCM Lane V/C Ratio	0.142	-	-	-	0.415
HCM Control Delay (s)	8.4	0	-	-	15.6
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.5	-	-	-	2

Farmington Connectivity Study  
13: Stafford Ave & Stevens St

2050 Scenario 3 (Route 177 Closed & No Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	43	180	73	76	335	34	155	272	69	20	197	44
Future Volume (vph)	43	180	73	76	335	34	155	272	69	20	197	44
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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			1.00	
Frt		0.967			0.990			0.981			0.977	
Flt Protected		0.993			0.992			0.985			0.996	
Satd. Flow (prot)	0	1824	0	0	1866	0	0	1836	0	0	1842	0
Flt Permitted		0.892			0.886			0.692			0.949	
Satd. Flow (perm)	0	1639	0	0	1667	0	0	1289	0	0	1755	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		543			653			565			383	
Travel Time (s)		12.3			14.8			12.8			8.7	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	44	184	74	78	342	35	158	278	70	20	201	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	302	0	0	455	0	0	506	0	0	266	0
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	81		20	81		20	116		20	106	
Trailing Detector (ft)	0	75		0	75		0	110		0	100	
Detector 1 Position(ft)	0	75		0	75		0	110		0	100	
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	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	19.0	19.0		19.0	19.0		19.0	19.0		19.0	19.0	
Total Split (s)	34.0	34.0		34.0	34.0		29.0	29.0		29.0	29.0	
Total Split (%)	41.5%	41.5%		41.5%	41.5%		35.4%	35.4%		35.4%	35.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	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			4.0			4.0	
Lead/Lag							Lag	Lag		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	19.0
Total Split (s)	19.0
Total Split (%)	23%
Maximum Green (s)	17.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes

Farmington Connectivity Study  
13: Stafford Ave & Stevens St

2050 Scenario 3 (Route 177 Closed & No Build) Conditions

PM Peak

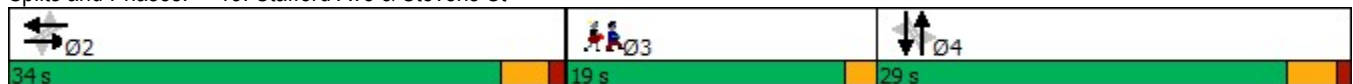


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	5.0	5.0		5.0	5.0		2.0	2.0		2.0	2.0	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	30.0				30.0		25.0				25.0	
Actuated g/C Ratio	0.37				0.37		0.30				0.30	
v/c Ratio	0.50				0.75		1.29				0.50	
Control Delay	23.8				31.9		176.9				27.2	
Queue Delay	0.0				0.0		0.0				0.0	
Total Delay	23.8				31.9		176.9				27.2	
LOS	C				C		F				C	
Approach Delay	23.8				31.9		176.9				27.2	
Approach LOS	C				C		F				C	
Queue Length 50th (ft)	118				200		~336				111	
Queue Length 95th (ft)	194				#321		#520				183	
Internal Link Dist (ft)	463				573		485				303	
Turn Bay Length (ft)												
Base Capacity (vph)	599				609		392				535	
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	0.50				0.75		1.29				0.50	

Intersection Summary

Area Type:	Other
Cycle Length:	82
Actuated Cycle Length:	82
Natural Cycle:	90
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.29
Intersection Signal Delay:	77.5
Intersection LOS:	E
Intersection Capacity Utilization:	85.0%
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.	

Splits and Phases: 13: Stafford Ave & Stevens St

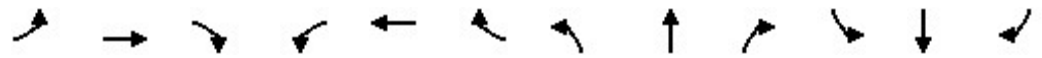


Lane Group	Ø3
Vehicle Extension (s)	3.0
Recall Mode	Ped
Walk Time (s)	7.0
Flash Dont Walk (s)	10.0
Pedestrian Calls (#/hr)	1
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
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	

Farmington Connectivity Study  
14: S Main St (RT 177) & Mill St

2050 Scenario 3 (Route 177 Closed & No Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗	↖	↗		↖	↗	
Traffic Volume (vph)	0	33	0	0	45	53	0	0	0	155	0	0
Future Volume (vph)	0	33	0	0	45	53	0	0	0	155	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		95	0		100	60		0	0		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
Frt						0.850						
Flt Protected										0.950		
Satd. Flow (prot)	0	1881	1881	0	1881	1599	1881	1881	0	1787	1881	0
Flt Permitted										0.757		
Satd. Flow (perm)	0	1881	1881	0	1881	1599	1881	1881	0	1424	1881	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			30			25				25
Link Distance (ft)		906			356			584				461
Travel Time (s)		24.7			8.1			15.9				12.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	0	37	0	0	50	59	0	0	0	172	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	37	0	0	50	59	0	0	0	172	0	0
Number of Detectors	1	1	1	1	1	1	1	0		0	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	50	50	20	40	40	50	0		0	0	
Trailing Detector (ft)	0	0	0	0	-10	-10	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	-10	-10	0	0		0	0	
Detector 1 Size(ft)	20	50	50	20	50	50	50	6		20	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	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		NA	pm+ov		NA	Prot	D,P+P			Perm		
Protected Phases		4	2		4	4	2	1 2				1
Permitted Phases	4		4	4			1			1		
Detector Phase	4	4	2	4	4	4	2	2		1	1	
Switch Phase												
Minimum Initial (s)	6.0	6.0	5.0	6.0	6.0	6.0	5.0			25.0	25.0	
Minimum Split (s)	10.3	10.3	9.6	10.3	10.3	10.3	9.6			29.6	29.6	
Total Split (s)	46.0	46.0	10.9	46.0	46.0	46.0	10.9			29.6	29.6	
Total Split (%)	41.3%	41.3%	9.8%	41.3%	41.3%	41.3%	9.8%			26.5%	26.5%	
Maximum Green (s)	41.7	41.7	6.3	41.7	41.7	41.7	6.3			25.0	25.0	
Yellow Time (s)	3.2	3.2	3.6	3.2	3.2	3.2	3.6			3.6	3.6	
All-Red Time (s)	1.1	1.1	1.0	1.1	1.1	1.1	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)		4.3	4.6		4.3	4.3	4.6			4.6	4.6	
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag			Lead	Lead	

Lane Group	Ø3
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)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	25.0
Total Split (s)	25.0
Total Split (%)	22%
Maximum Green (s)	21.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead

Farmington Connectivity Study  
 14: S Main St (RT 177) & Mill St

2050 Scenario 3 (Route 177 Closed & No Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5			3.0	3.0	
Recall Mode	None	None	None	None	None	None	None			Max	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	6.2			6.2			6.2			28.7		
Actuated g/C Ratio	0.15			0.15			0.15			0.70		
v/c Ratio	0.13			0.18			0.25			0.17		
Control Delay	15.8			16.4			17.7			3.8		
Queue Delay	0.0			0.0			0.0			0.0		
Total Delay	15.8			16.4			17.7			3.8		
LOS	B			B			B			A		
Approach Delay	15.8			17.1						3.8		
Approach LOS	B			B						A		
Queue Length 50th (ft)	7			10			12			12		
Queue Length 95th (ft)	24			30			35			30		
Internal Link Dist (ft)	826			276			504			381		
Turn Bay Length (ft)							100					
Base Capacity (vph)	1856			1856			1578			995		
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	0.02			0.03			0.04			0.17		

Intersection Summary

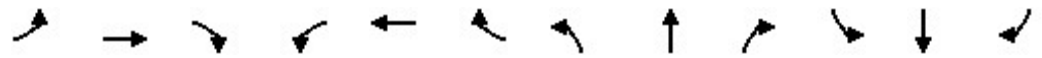
Area Type: Other  
 Cycle Length: 111.5  
 Actuated Cycle Length: 41  
 Natural Cycle: 75  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.25  
 Intersection Signal Delay: 9.8  
 Intersection Capacity Utilization 33.3%  
 Analysis Period (min) 15  
 Intersection LOS: A  
 ICU Level of Service A

Splits and Phases: 14: S Main St (RT 177) & Mill St



Lane Group	Ø3
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	14.0
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	
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	

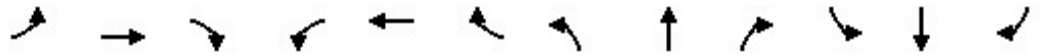
Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 15: S Main St (RT 177) & Railroad Ave/New Britain Ave PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			←	↗	↖	↑	↘	↙	↓	↘
Traffic Volume (vph)	0	0	51	117	1	0	19	0	29	0	0	0
Future Volume (vph)	0	0	51	117	1	0	19	0	29	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		200	80		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			80			50		
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		0.97			0.99		1.00					
Frt		0.865						0.850				
Flt Protected					0.953		0.950					
Satd. Flow (prot)	0	1578	0	0	1793	1881	1787	1599	0	1881	1881	0
Flt Permitted					0.687		0.757					
Satd. Flow (perm)	0	1578	0	0	1280	1881	1419	1599	0	1881	1881	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			30			25				25
Link Distance (ft)		579			590			1222				584
Travel Time (s)		15.8			13.4			33.3				15.9
Confl. Peds. (#/hr)			5	5			3					3
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	0	0	56	129	1	0	21	0	32	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	56	0	0	130	0	21	32	0	0	0	0
Number of Detectors	1	1		1	1	1	0	2		1	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40	40	0	206		50	206	
Trailing Detector (ft)	0	-10		0	-10	-10	0	100		0	100	
Detector 1 Position(ft)	0	-10		0	-10	-10	0	100		0	100	
Detector 1 Size(ft)	20	50		20	50	50	20	6		50	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)								200				200
Detector 2 Size(ft)								6				6
Detector 2 Type								Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)								0.0				0.0
Turn Type		NA		Perm	NA	pt+ov	Perm	NA		D.P+P		
Protected Phases		4			4	24		1		2	12	
Permitted Phases	4			4			1			1		
Detector Phase	4	4		4	4	4	1	1		2	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		25.0	25.0		5.0		
Minimum Split (s)	10.2	10.2		10.2	10.2		29.6	29.6		9.6		
Total Split (s)	35.0	35.0		35.0	35.0		62.0	62.0		11.4		

Lane Group	Ø3
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)	
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	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	23.0
Total Split (s)	23.0

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 15: S Main St (RT 177) & Railroad Ave/New Britain Ave PM Peak

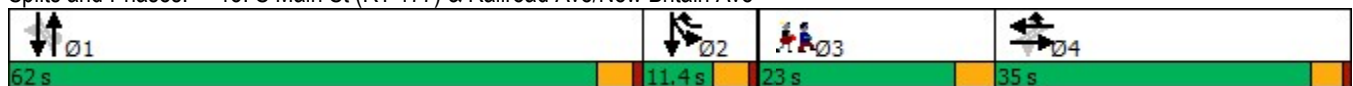


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	26.6%	26.6%		26.6%	26.6%		47.2%	47.2%		8.7%		
Maximum Green (s)	30.8	30.8		30.8	30.8		57.4	57.4		6.8		
Yellow Time (s)	3.2	3.2		3.2	3.2		3.6	3.6		3.6		
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0		
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0		
Total Lost Time (s)		4.2			4.2		4.6	4.6		4.6		
Lead/Lag	Lag	Lag		Lag	Lag		Lead	Lead		Lag		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes		
Vehicle Extension (s)	1.5	1.5		1.5	1.5		2.5	2.5		1.5		
Recall Mode	None	None		None	None		Min	Min		None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		9.4			9.4		28.4	28.4				
Actuated g/C Ratio		0.19			0.19		0.57	0.57				
v/c Ratio		0.19			0.54		0.03	0.04				
Control Delay		19.7			28.3		10.0	9.8				
Queue Delay		0.0			0.0		0.0	0.0				
Total Delay		19.7			28.3		10.0	9.8				
LOS		B			C		A	A				
Approach Delay		19.7			28.3			9.9				
Approach LOS		B			C			A				
Queue Length 50th (ft)		11			28		2	3				
Queue Length 95th (ft)		50			102		20	27				
Internal Link Dist (ft)		499			510			1142			504	
Turn Bay Length (ft)							80					
Base Capacity (vph)		1012			821		1360	1532				
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		0.06			0.16		0.02	0.02				

Intersection Summary

Area Type:	Other
Cycle Length:	131.4
Actuated Cycle Length:	50.2
Natural Cycle:	75
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.54
Intersection Signal Delay:	22.2
Intersection LOS:	C
Intersection Capacity Utilization:	41.4%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 15: S Main St (RT 177) & Railroad Ave/New Britain Ave



Lane Group	Ø3
Total Split (%)	18%
Maximum Green (s)	19.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	11
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 16: S Main St (RT 177) & Webster St PM Peak



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	218	199	149	381	3
Future Volume (vph)	1	218	199	149	381	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.866			0.999		
Flt Protected				0.972		
Satd. Flow (prot)	1629	0	0	1829	1879	0
Flt Permitted				0.972		
Satd. Flow (perm)	1629	0	0	1829	1879	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	805			584	1222	
Travel Time (s)	22.0			15.9	33.3	
Confl. Peds. (#/hr)				2		2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	1	227	207	155	397	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	228	0	0	362	400	0
Sign Control	Stop			Free	Free	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	62.6%
ICU Level of Service	B
Analysis Period (min)	15

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 16: S Main St (RT 177) & Webster St PM Peak

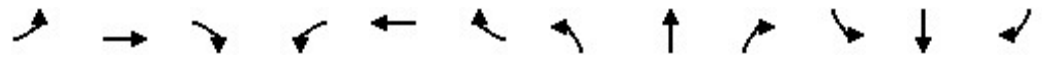
Intersection						
Int Delay, s/veh	5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	1	218	199	149	381	3
Future Vol, veh/h	1	218	199	149	381	3
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	1	227	207	155	397	3

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	970	401	402	0	-	0
Stage 1	401	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	282	651	1162	-	-	-
Stage 1	678	-	-	-	-	-
Stage 2	568	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	226	650	1160	-	-	-
Mov Cap-2 Maneuver	226	-	-	-	-	-
Stage 1	544	-	-	-	-	-
Stage 2	567	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.6	5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1160	-	644	-	-
HCM Lane V/C Ratio	0.179	-	0.354	-	-
HCM Control Delay (s)	8.8	0	13.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.6	-	1.6	-	-

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 17: Plainville Ave (RT 177) & Coopermine Rd PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	72	46	27	78	106	46	78	653	78	23	443	92
Future Volume (vph)	72	46	27	78	106	46	78	653	78	23	443	92
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	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.975			0.973			0.987			0.978	
Fl <sub>t</sub> Protected		0.976			0.983			0.995			0.998	
Satd. Flow (prot)	0	1790	0	0	1799	0	0	1847	0	0	1836	0
Fl <sub>t</sub> Permitted		0.645			0.829			0.895			0.952	
Satd. Flow (perm)	0	1183	0	0	1517	0	0	1662	0	0	1751	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			12			8			15	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		498			472			529			491	
Travel Time (s)		9.7			9.2			10.3			9.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	74	47	28	80	109	47	80	673	80	24	457	95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	149	0	0	236	0	0	833	0	0	576	0
Number of Detectors	1	3		1	3		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	24		20	24		20	361		20	361	
Trailing Detector (ft)	0	-10		0	-10		0	185		0	185	
Detector 1 Position(ft)	0	-10		0	-10		0	185		0	185	
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)		6			6			355			355	
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	
Detector 3 Position(ft)		18			18							
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	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	20.5	20.5		20.5	20.5		21.9	21.9		21.9	21.9	
Total Split (s)	40.5	40.5		40.5	40.5		66.9	66.9		66.9	66.9	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 17: Plainville Ave (RT 177) & Coopermine Rd PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	37.7%	37.7%		37.7%	37.7%		62.3%	62.3%		62.3%	62.3%	
Maximum Green (s)	35.0	35.0		35.0	35.0		60.0	60.0		60.0	60.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		4.4	4.4		4.4	4.4	
All-Red Time (s)	2.2	2.2		2.2	2.2		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.5			5.5			6.9			6.9	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5		1.5	1.5		5.0	5.0		5.0	5.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	14.0	14.0		14.0	14.0							
Flash Dont Walk (s)	1.0	1.0		1.0	1.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		16.7			16.7			55.6			55.6	
Actuated g/C Ratio		0.20			0.20			0.65			0.65	
v/c Ratio		0.62			0.77			0.76			0.50	
Control Delay		41.6			48.8			17.1			9.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		41.6			48.8			17.1			9.8	
LOS		D			D			B			A	
Approach Delay		41.6			48.8			17.1			9.8	
Approach LOS		D			D			B			A	
Queue Length 50th (ft)		72			122			267			134	
Queue Length 95th (ft)		134			203			557			270	
Internal Link Dist (ft)		418			392			449			411	
Turn Bay Length (ft)												
Base Capacity (vph)		508			649			1209			1276	
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		0.29			0.36			0.69			0.45	



















Intersection Summary

Area Type:	Other
Cycle Length:	107.4
Actuated Cycle Length:	85.1
Natural Cycle:	65
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.77
Intersection Signal Delay:	21.0
Intersection LOS:	C
Intersection Capacity Utilization:	94.7%
ICU Level of Service:	F
Analysis Period (min):	15

Splits and Phases: 17: Plainville Ave (RT 177) & Coopermine Rd



Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	100	150	41	225	91	292	815	26	57	515	44
Future Volume (vph)	27	100	150	41	225	91	292	815	26	57	515	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	250		0	80		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			100			40		
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		0.927			0.966			0.995			0.988	
Flt Protected		0.995			0.994		0.950			0.950		
Satd. Flow (prot)	0	1735	0	0	1806	0	1787	1872	0	1787	1859	0
Flt Permitted		0.908			0.905		0.240			0.128		
Satd. Flow (perm)	0	1583	0	0	1645	0	451	1872	0	241	1859	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					14			2				5
Link Speed (mph)		30			30			45				45
Link Distance (ft)		594			761			713				527
Travel Time (s)		13.5			17.3			10.8				8.0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	28	102	153	42	230	93	298	832	27	58	526	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	283	0	0	365	0	298	859	0	58	571	0
Number of Detectors	1	3		1	2		3	1		3	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	18		20	12		24	356		24	206	
Trailing Detector (ft)	0	-10		0	-6		-6	350		-6	200	
Detector 1 Position(ft)	0	-10		0	-6		-6	350		-6	200	
Detector 1 Size(ft)	20	6		20	6		6	6		6	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)		0			6		6			6		
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		
Detector 3 Position(ft)		12					18			18		
Detector 3 Size(ft)		6					6			6		
Detector 3 Type		Cl+Ex					Cl+Ex			Cl+Ex		
Detector 3 Channel												
Detector 3 Extend (s)		0.0					0.0			0.0		
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		5	2		1	6	
Switch Phase												

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	7.0	7.0		7.0	7.0		3.0	30.0		3.0	30.0	
Minimum Split (s)	30.9	30.9		30.9	30.9		7.0	37.1		7.0	37.1	
Total Split (s)	34.9	34.9		34.9	34.9		19.0	67.1		12.0	67.1	
Total Split (%)	28.8%	28.8%		28.8%	28.8%		15.7%	55.5%		9.9%	55.5%	
Maximum Green (s)	30.0	30.0		30.0	30.0		15.0	60.0		8.0	60.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.0	4.4		3.0	4.4	
All-Red Time (s)	1.6	1.6		1.6	1.6		1.0	2.7		1.0	2.7	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.9			4.9		4.0	7.1		4.0	7.1	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)	25.0	25.0		25.0	25.0							
Flash Dont Walk (s)	1.0	1.0		1.0	1.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		27.0			27.0		64.0	53.1		53.0	43.9	
Actuated g/C Ratio		0.27			0.27		0.64	0.53		0.53	0.44	
v/c Ratio		0.66			0.80		0.65	0.86		0.27	0.70	
Control Delay		42.8			49.2		15.2	32.5		11.1	28.2	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		42.8			49.2		15.2	32.5		11.1	28.2	
LOS		D			D		B	C		B	C	
Approach Delay		42.8			49.2			28.0			26.6	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)		170			221		82	505		14	302	
Queue Length 95th (ft)		282			#394		122	#790		28	439	
Internal Link Dist (ft)		514			681			633			447	
Turn Bay Length (ft)							250			80		
Base Capacity (vph)		486			515		493	1285		259	1144	
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		0.58			0.71		0.60	0.67		0.22	0.50	

Intersection Summary

Area Type: Other  
 Cycle Length: 121  
 Actuated Cycle Length: 100.1  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 32.5 Intersection LOS: C  
 Intersection Capacity Utilization 88.4% 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: 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd

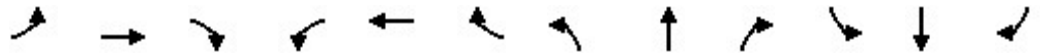


Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6) PM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	448	127	180	748	284	128	757	105	174	507	115
Future Volume (vph)	130	448	127	180	748	284	128	757	105	174	507	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260		260	180		0	250		250	165		165
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (ft)	190			170			150			115		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor				1.00						1.00		
Frt			0.850		0.959				0.850		0.972	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1881	1599	1787	3428	0	1787	1881	1599	1787	3474	0
Flt Permitted	0.950			0.950			0.271			0.088		
Satd. Flow (perm)	1787	1881	1599	1783	3428	0	510	1881	1599	166	3474	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			120		30				65		15	
Link Speed (mph)		45			45			40			45	
Link Distance (ft)		780			1567			643			474	
Travel Time (s)		11.8			23.7			11.0			7.2	
Confl. Peds. (#/hr)			2	2					1	1		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	133	457	130	184	763	290	131	772	107	178	517	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	133	457	130	184	1053	0	131	772	107	178	634	0
Number of Detectors	3	2	2	3	2		3	3	3	3	3	
Detector Template												
Leading Detector (ft)	24	306	306	24	306		24	24	24	24	24	
Trailing Detector (ft)	-6	150	150	-6	150		-6	-6	-6	-6	-6	
Detector 1 Position(ft)	-6	150	150	-6	150		-6	-6	-6	-6	-6	
Detector 1 Size(ft)	6	6	6	6	6		6	6	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	6	300	300	6	300		6	6	6	6	6	
Detector 2 Size(ft)	6	6	6	6	6		6	6	6	6	6	
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 3 Position(ft)	18			18			18	18	18	18	18	
Detector 3 Size(ft)	6			6			6	6	6	6	6	
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0	0.0	0.0	0.0	
Turn Type	Prot	NA	Prot	Prot	NA		pm+pt	NA	pt+ov	pm+pt	NA	
Protected Phases	1	6	6	5	2		3	8	5 8	7	4	
Permitted Phases							8			4		

Lane Group	Ø9
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)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6) PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6	6	5	2		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0		5.0	9.0		5.0	9.0	
Minimum Split (s)	9.0	20.2	20.2	9.0	20.2		9.0	14.7		9.0	14.7	
Total Split (s)	25.0	35.2	35.2	25.0	45.2		22.0	50.7		14.0	45.7	
Total Split (%)	14.7%	20.7%	20.7%	14.7%	26.6%		12.9%	29.8%		8.2%	26.9%	
Maximum Green (s)	21.0	30.0	30.0	21.0	40.0		18.0	45.0		10.0	40.0	
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2		3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.2		1.0	1.2	
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)	4.0	5.2	5.2	4.0	5.2		4.0	5.7		4.0	5.7	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	2.5	2.5	1.5	2.5		2.0	3.0		2.0	2.0	
Recall Mode	None	Min	Min	None	Min		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	13.7	36.6	36.6	17.7	40.6		57.8	46.1	68.9	57.5	45.7	
Actuated g/C Ratio	0.10	0.27	0.27	0.13	0.30		0.43	0.34	0.51	0.43	0.34	
v/c Ratio	0.73	0.90	0.25	0.79	1.00		0.41	1.20	0.13	0.93	0.53	
Control Delay	83.6	69.2	10.3	80.8	73.2		28.4	143.5	6.9	80.5	40.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	83.6	69.2	10.3	80.8	73.2		28.4	143.5	6.9	80.5	40.2	
LOS	F	E	B	F	E		C	F	A	F	D	
Approach Delay		61.2			74.4			114.1			49.0	
Approach LOS		E			E			F			D	
Queue Length 50th (ft)	108	361	6	147	438		59	~753	16	93	210	
Queue Length 95th (ft)	221	#773	67	#340	#904		153	#1425	43	#365	418	
Internal Link Dist (ft)		700			1487			563			394	
Turn Bay Length (ft)	260		260	180			250		250	165		
Base Capacity (vph)	282	566	565	282	1052		407	679	839	192	1186	
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	0.47	0.81	0.23	0.65	1.00		0.32	1.14	0.13	0.93	0.53	

**Intersection Summary**

Area Type:	Other
Cycle Length:	169.9
Actuated Cycle Length:	134.8
Natural Cycle:	145
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.20
Intersection Signal Delay:	77.0
Intersection LOS:	E
Intersection Capacity Utilization:	102.2%
ICU Level of Service:	G
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	

Lane Group	Ø9
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	32.0
Total Split (s)	32.0
Total Split (%)	19%
Maximum Green (s)	28.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
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)	21.0
Pedestrian Calls (#/hr)	4
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	

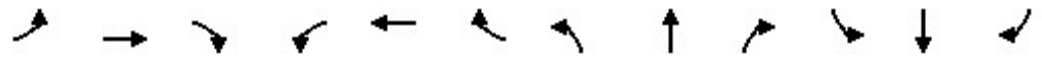
Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6) PM Peak

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

Splits and Phases: 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)

↖ Ø1 25 s	← Ø2 45.2 s	↖ Ø3 22 s	↓ Ø4 45.7 s	🚶 Ø9 32 s
↖ Ø5 25 s	→ Ø6 35.2 s	↖ Ø7 14 s	↕ Ø8 50.7 s	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 20: Unionville Ave (RT 177) & Northwest Dr PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	113	111	250	259	140	139	906	77	81	559	15
Future Volume (vph)	30	113	111	250	259	140	139	906	77	81	559	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	210		0	260		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
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		0.926			0.947			0.988				0.996
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1725	0	1770	1764	0	1770	3497	0	1770	3523	0
Flt Permitted	0.421			0.379			0.255			0.165		
Satd. Flow (perm)	784	1725	0	706	1764	0	475	3497	0	307	3523	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32			20			6				2
Link Speed (mph)		35			35			40				40
Link Distance (ft)		710			592			572				675
Travel Time (s)		13.8			11.5			9.8				11.5
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	31	118	116	260	270	146	145	944	80	84	582	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	31	234	0	260	416	0	145	1024	0	84	598	0
Number of Detectors	3	3		3	3		3	2		3	2	
Detector Template												
Leading Detector (ft)	24	24		24	24		24	331		24	331	
Trailing Detector (ft)	-6	-6		-6	-6		-6	150		-6	150	
Detector 1 Position(ft)	-6	-6		-6	-6		-6	150		-6	150	
Detector 1 Size(ft)	6	6		6	6		6	6		6	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)	6	6		6	6		6	325		6	325	
Detector 2 Size(ft)	6	6		6	6		6	6		6	6	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 3 Position(ft)	18	18		18	18		18			18		
Detector 3 Size(ft)	6	6		6	6		6			6		
Detector 3 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex		
Detector 3 Channel												
Detector 3 Extend (s)	0.0	0.0		0.0	0.0		0.0			0.0		
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	

Lane Group	Ø9
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	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 20: Unionville Ave (RT 177) & Northwest Dr PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
<b>Switch Phase</b>												
Minimum Initial (s)	4.0	9.0		4.0	9.0		4.0	15.0		4.0	15.0	
Minimum Split (s)	8.0	15.2		8.0	15.2		8.0	22.5		8.0	22.5	
Total Split (s)	14.0	23.2		26.0	35.2		16.0	32.5		12.0	28.5	
Total Split (%)	10.9%	18.0%		20.2%	27.4%		12.4%	25.3%		9.3%	22.1%	
Maximum Green (s)	10.0	17.0		22.0	29.0		12.0	25.0		8.0	21.0	
Yellow Time (s)	3.0	4.1		3.0	4.1		3.0	4.8		3.0	4.8	
All-Red Time (s)	1.0	2.1		1.0	2.1		1.0	2.7		1.0	2.7	
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	6.2		4.0	6.2		4.0	7.5		4.0	7.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	3.0		1.5	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
<b>Walk Time (s)</b>												
<b>Flash Dont Walk (s)</b>												
<b>Pedestrian Calls (#/hr)</b>												
Act Effct Green (s)	26.4	18.3		38.2	30.2		38.3	27.5		33.5	23.3	
Actuated g/C Ratio	0.29	0.20		0.42	0.33		0.42	0.30		0.37	0.26	
v/c Ratio	0.11	0.63		0.57	0.70		0.45	0.97		0.39	0.66	
Control Delay	21.5	40.3		25.9	35.9		25.2	55.8		26.1	37.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	21.5	40.3		25.9	35.9		25.2	55.8		26.1	37.7	
LOS	C	D		C	D		C	E		C	D	
Approach Delay		38.1			32.1			52.0			36.3	
Approach LOS		D			C			D			D	
Queue Length 50th (ft)	9	96		87	190		47	~321		26	154	
Queue Length 95th (ft)	40	#328		243	#532		147	#761		92	#404	
Internal Link Dist (ft)		630			512			492			595	
Turn Bay Length (ft)							210			260		
Base Capacity (vph)	379	391		563	610		384	1057		252	900	
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	0.08	0.60		0.46	0.68		0.38	0.97		0.33	0.66	

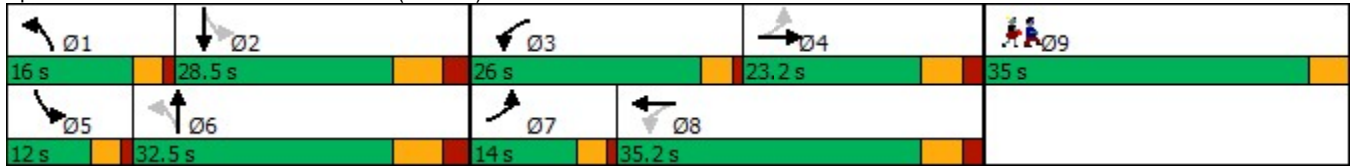
**Intersection Summary**

Area Type: Other  
 Cycle Length: 128.7  
 Actuated Cycle Length: 91.2  
 Natural Cycle: 130  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.97  
 Intersection Signal Delay: 42.0 Intersection LOS: D  
 Intersection Capacity Utilization 76.7% 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.

Lane Group	Ø9
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	35.0
Total Split (s)	35.0
Total Split (%)	27%
Maximum Green (s)	31.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
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)	24.0
Pedestrian Calls (#/hr)	1
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

Queue shown is maximum after two cycles.

Splits and Phases: 20: Unionville Ave (RT 177) & Northwest Dr



Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 21: New Britain Ave & Red Oak Hill Rd PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	6	166	34	28	224	137	119	149	29	152	63	3
Future Volume (vph)	6	166	34	28	224	137	119	149	29	152	63	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	1.00	1.00	1.00	1.00	1.00
Frt		0.978			0.952			0.987			0.998	
Flt Protected		0.999			0.996			0.980			0.966	
Satd. Flow (prot)	0	1820	0	0	1766	0	0	1802	0	0	1796	0
Flt Permitted		0.999			0.996			0.980			0.966	
Satd. Flow (perm)	0	1820	0	0	1766	0	0	1802	0	0	1796	0
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		506			528			2775			437	
Travel Time (s)		9.9			10.3			63.1			9.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	6	177	36	30	238	146	127	159	31	162	67	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	219	0	0	414	0	0	317	0	0	232	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	60.4%
Analysis Period (min)	15
	ICU Level of Service B

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 21: New Britain Ave & Red Oak Hill Rd PM Peak

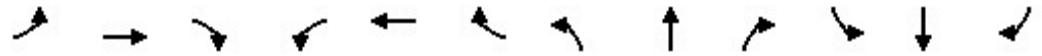
Intersection	
Intersection Delay, s/veh	18.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	166	34	28	224	137	119	149	29	152	63	3
Future Vol, veh/h	6	166	34	28	224	137	119	149	29	152	63	3
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	177	36	30	238	146	127	159	31	162	67	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.2	22.3	18.2	15.4
HCM LOS	B	C	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	40%	3%	7%	70%
Vol Thru, %	50%	81%	58%	29%
Vol Right, %	10%	17%	35%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	297	206	389	218
LT Vol	119	6	28	152
Through Vol	149	166	224	63
RT Vol	29	34	137	3
Lane Flow Rate	316	219	414	232
Geometry Grp	1	1	1	1
Degree of Util (X)	0.575	0.404	0.701	0.443
Departure Headway (Hd)	6.555	6.641	6.099	6.87
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	547	539	592	522
Service Time	4.63	4.725	4.167	4.952
HCM Lane V/C Ratio	0.578	0.406	0.699	0.444
HCM Control Delay	18.2	14.2	22.3	15.4
HCM Lane LOS	C	B	C	C
HCM 95th-tile Q	3.6	1.9	5.6	2.2

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 22: New Britain Ave & Meadow Rd PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	77	109	54	7	118	9	149	312	14	2	91	40
Future Volume (vph)	77	109	54	7	118	9	149	312	14	2	91	40
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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.969			0.991			0.996			0.960	
Flt Protected		0.984			0.997			0.985			0.999	
Satd. Flow (prot)	0	1776	0	0	1840	0	0	1827	0	0	1786	0
Flt Permitted		0.984			0.997			0.985			0.999	
Satd. Flow (perm)	0	1776	0	0	1840	0	0	1827	0	0	1786	0
Link Speed (mph)		30			35			30			30	
Link Distance (ft)		414			396			469			2775	
Travel Time (s)		9.4			7.7			10.7			63.1	
Confl. Peds. (#/hr)			14	14			8		17	17		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)	84	118	59	8	128	10	162	339	15	2	99	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	261	0	0	146	0	0	516	0	0	144	0
Sign Control		Stop			Stop			Stop			Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	68.6%
Analysis Period (min)	15
	ICU Level of Service C

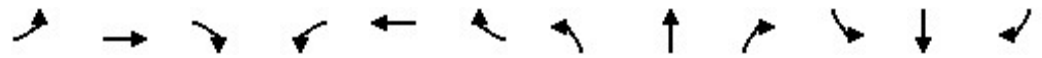
Intersection	
Intersection Delay, s/veh	19
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	77	109	54	7	118	9	149	312	14	2	91	40
Future Vol, veh/h	77	109	54	7	118	9	149	312	14	2	91	40
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	2	2	2	2	2	2	2	2	2
Mvmt Flow	84	118	59	8	128	10	162	339	15	2	99	43
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.8	11.6	25.9	10.9
HCM LOS	B	B	D	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	31%	32%	5%	2%
Vol Thru, %	66%	45%	88%	68%
Vol Right, %	3%	23%	7%	30%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	475	240	134	133
LT Vol	149	77	7	2
Through Vol	312	109	118	91
RT Vol	14	54	9	40
Lane Flow Rate	516	261	146	145
Geometry Grp	1	1	1	1
Degree of Util (X)	0.787	0.437	0.256	0.237
Departure Headway (Hd)	5.49	6.028	6.32	5.914
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	656	592	562	601
Service Time	3.556	4.114	4.42	4.012
HCM Lane V/C Ratio	0.787	0.441	0.26	0.241
HCM Control Delay	25.9	13.8	11.6	10.9
HCM Lane LOS	D	B	B	B
HCM 95th-tile Q	7.7	2.2	1	0.9

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 23: New Britain Ave & Scott Swamp Rd (US 6) PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	678	38	26	1029	330	27	111	16	99	91	22
Future Volume (vph)	33	678	38	26	1029	330	27	111	16	99	91	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	340		0	100		320	190		0	120		0
Storage Lanes	1		0	1		1	1		0	2		0
Taper Length (ft)	150			100			100			110		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.992				0.850		0.981			0.970	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3546	0	1787	3574	1599	1787	1845	0	3467	1825	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1787	3546	0	1787	3574	1599	1787	1845	0	3467	1825	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7				355		8			13	
Link Speed (mph)		45			45			25			35	
Link Distance (ft)		3978			920			676			631	
Travel Time (s)		60.3			13.9			18.4			12.3	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	35	729	41	28	1106	355	29	119	17	106	98	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	770	0	28	1106	355	29	136	0	106	122	0
Number of Detectors	3	0		3	0	0	3	3		3	3	
Detector Template												
Leading Detector (ft)	24	0		24	0	0	24	24		24	24	
Trailing Detector (ft)	-10	0		-10	0	0	-6	-6		-6	-6	
Detector 1 Position(ft)	-10	0		-10	0	0	-6	-6		-6	-6	
Detector 1 Size(ft)	6	6		6	6	20	6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
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)	6			6			6	6		6	6	
Detector 2 Size(ft)	6			6			6	6		6	6	
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0		0.0	0.0	
Detector 3 Position(ft)	18			18			18	18		18	18	
Detector 3 Size(ft)	6			6			6	6		6	6	
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0		0.0	0.0	
Turn Type	Prot	NA		Prot	NA	pt+ov	Split	NA		Split	NA	
Protected Phases	1	6		5	2	2 7	8	8		7	7	
Permitted Phases												
Detector Phase	1	6		5	2	2	8	8		7	7	
Switch Phase												

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 23: New Britain Ave & Scott Swamp Rd (US 6) PM Peak

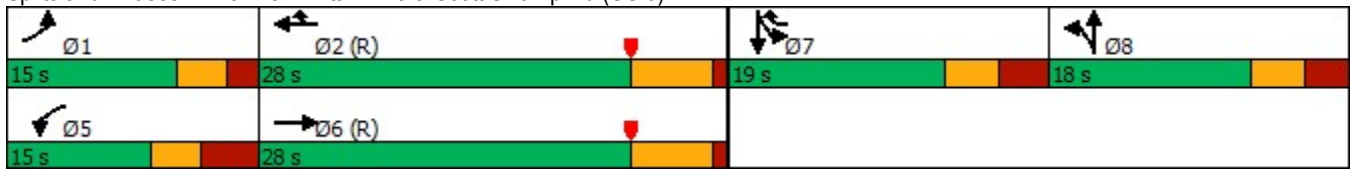


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0		7.0	7.0	
Minimum Split (s)	9.9	20.8		11.4	20.8		34.0	34.0		13.2	13.2	
Total Split (s)	15.0	28.0		15.0	28.0		18.0	18.0		19.0	19.0	
Total Split (%)	18.8%	35.0%		18.8%	35.0%		22.5%	22.5%		23.8%	23.8%	
Maximum Green (s)	10.1	22.2		8.6	22.2		12.0	12.0		12.8	12.8	
Yellow Time (s)	3.0	4.8		3.0	4.8		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.9	1.0		3.4	1.0		2.7	2.7		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.9	5.8		6.4	5.8		6.0	6.0		6.2	6.2	
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)							27.0	27.0				
Flash Dont Walk (s)							1.0	1.0				
Pedestrian Calls (#/hr)							0	0				
Act Effct Green (s)	6.3	37.5		6.0	35.7	51.5	9.5	9.5		9.5	9.5	
Actuated g/C Ratio	0.08	0.47		0.08	0.45	0.64	0.12	0.12		0.12	0.12	
v/c Ratio	0.25	0.46		0.21	0.69	0.31	0.14	0.60		0.26	0.54	
Control Delay	38.4	18.3		39.8	20.2	5.6	31.7	42.3		32.8	37.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	38.4	18.3		39.8	20.2	5.6	31.7	42.3		32.8	37.8	
LOS	D	B		D	C	A	C	D		C	D	
Approach Delay		19.1			17.1			40.4			35.5	
Approach LOS		B			B			D			D	
Queue Length 50th (ft)	17	111		15	267	31	13	61		25	52	
Queue Length 95th (ft)	43	246		m25	#446	164	36	114		45	99	
Internal Link Dist (ft)		3898			840			596			551	
Turn Bay Length (ft)	340			100		320	190			120		
Base Capacity (vph)	225	1666		192	1596	1155	268	283		554	302	
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	0.16	0.46		0.15	0.69	0.31	0.11	0.48		0.19	0.40	

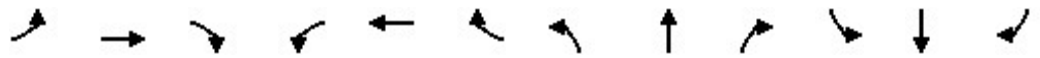
**Intersection Summary**

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 55 (69%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.69  
 Intersection Signal Delay: 20.7 Intersection LOS: C  
 Intersection Capacity Utilization 56.1% 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: 23: New Britain Ave & Scott Swamp Rd (US 6)



Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 24: Hyde Rd & Scott Swamp Rd (US 6) PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	891	23	174	1229	3	12	0	255	16	7	9
Future Volume (vph)	2	891	23	174	1229	3	12	0	255	16	7	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		0	360		0	0		0	0		0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	100			65			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996							0.850			0.850
Flt Protected	0.950			0.950				0.950			0.967	
Satd. Flow (prot)	1787	3560	0	1787	3574	0	0	1787	1599	0	1819	1599
Flt Permitted	0.950			0.950				0.909			0.786	
Satd. Flow (perm)	1787	3560	0	1787	3574	0	0	1710	1599	0	1479	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4							76			113
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1090			523			762			370	
Travel Time (s)		16.5			7.9			20.8			10.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	2	979	25	191	1351	3	13	0	280	18	8	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	1004	0	191	1354	0	0	13	280	0	26	10
Number of Detectors	3	0		3	0		1	3	3	1	3	3
Detector Template							Left			Left		
Leading Detector (ft)	24	0		24	0		20	24	24	20	24	24
Trailing Detector (ft)	-10	0		-10	0		0	-10	-10	0	-10	-10
Detector 1 Position(ft)	-10	0		-10	0		0	-10	-10	0	-10	-10
Detector 1 Size(ft)	6	6		6	6		20	6	6	20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	6			6			6	6	6		6	6
Detector 2 Size(ft)	6			6			6	6	6		6	6
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0	0.0		0.0	0.0
Detector 3 Position(ft)	18			18			18	18	18		18	18
Detector 3 Size(ft)	6			6			6	6	6		6	6
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	NA		Prot	NA		Perm	NA	pm+ov	Perm	NA	Perm
Protected Phases	1	6		5	2			4	5		4	
Permitted Phases							4		4	4		4
Detector Phase	1	6		5	2		4	4	5	4	4	4
Switch Phase												

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 24: Hyde Rd & Scott Swamp Rd (US 6) PM Peak

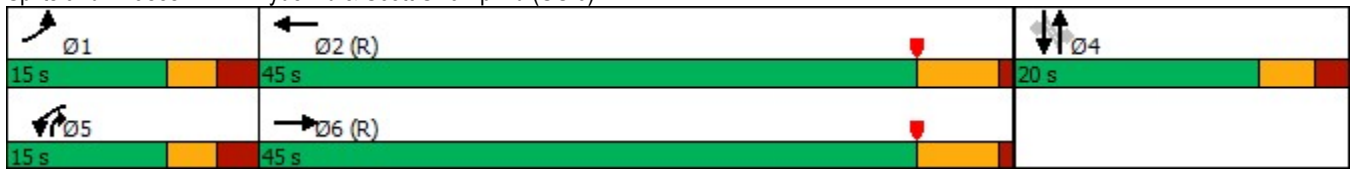


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0		7.0	7.0	5.0	7.0	7.0	7.0
Minimum Split (s)	10.5	21.8		10.5	21.8		30.5	30.5	10.5	30.5	30.5	30.5
Total Split (s)	15.0	45.0		15.0	45.0		20.0	20.0	15.0	20.0	20.0	20.0
Total Split (%)	18.8%	56.3%		18.8%	56.3%		25.0%	25.0%	18.8%	25.0%	25.0%	25.0%
Maximum Green (s)	9.5	39.2		9.5	39.2		14.5	14.5	9.5	14.5	14.5	14.5
Yellow Time (s)	3.0	4.8		3.0	4.8		3.3	3.3	3.0	3.3	3.3	3.3
All-Red Time (s)	2.5	1.0		2.5	1.0		2.2	2.2	2.5	2.2	2.2	2.2
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)	5.5	5.8		5.5	5.8		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	None
Walk Time (s)		15.0			15.0		24.0	24.0		24.0	24.0	24.0
Flash Dont Walk (s)		1.0			1.0		1.0	1.0		1.0	1.0	1.0
Pedestrian Calls (#/hr)		0			0		0	0		0	0	0
Act Effct Green (s)	5.0	47.0		14.0	66.7			7.2	21.7		7.2	7.2
Actuated g/C Ratio	0.06	0.59		0.18	0.83		0.09	0.27		0.09	0.09	0.09
v/c Ratio	0.02	0.48		0.61	0.45		0.08	0.57		0.20	0.04	0.04
Control Delay	53.0	10.1		40.4	3.3		34.5	21.1		37.2	0.3	0.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	53.0	10.1		40.4	3.3		34.5	21.1		37.2	0.3	0.3
LOS	D	B		D	A		C	C		D	A	A
Approach Delay		10.2			7.9		21.7			27.0		
Approach LOS		B			A		C			C		
Queue Length 50th (ft)	1	220		84	67		6	76		12	0	0
Queue Length 95th (ft)	m3	302		m145	180		23	139		36	0	0
Internal Link Dist (ft)		1010			443		682			290		
Turn Bay Length (ft)	130			360								
Base Capacity (vph)	212	2091		313	2978		309	489		268	382	
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	0.01	0.48		0.61	0.45		0.04	0.57		0.10	0.03	

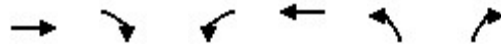
**Intersection Summary**

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 27 (34%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.61  
 Intersection Signal Delay: 10.3 Intersection LOS: B  
 Intersection Capacity Utilization 61.0% ICU Level of Service B  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 24: Hyde Rd & Scott Swamp Rd (US 6)

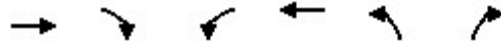


Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 25: Scott Swamp Rd (RT 552) & Scott Swamp Rd (US 6)/Colt Hwy (US 6) PM Peak



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	
Traffic Volume (vph)	793	322	179	1161	323	40
Future Volume (vph)	793	322	179	1161	323	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		350	350		380	0
Storage Lanes		1	1		1	0
Taper Length (ft)			100		130	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	0.95
Frt		0.850			0.984	
Flt Protected			0.950		0.957	
Satd. Flow (prot)	3574	1599	1787	3574	3437	0
Flt Permitted			0.950		0.957	
Satd. Flow (perm)	3574	1599	1787	3574	3437	0
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			45	30	
Link Distance (ft)	1087			600	782	
Travel Time (s)	16.5			9.1	17.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	862	350	195	1262	351	43
Shared Lane Traffic (%)						
Lane Group Flow (vph)	862	350	195	1262	394	0
Number of Detectors	0	0	3	0	1	
Detector Template						
Leading Detector (ft)	0	0	24	0	56	
Trailing Detector (ft)	0	0	-10	0	50	
Detector 1 Position(ft)	0	0	-10	0	50	
Detector 1 Size(ft)	6	20	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)			6			
Detector 2 Size(ft)			6			
Detector 2 Type			Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)			0.0			
Detector 3 Position(ft)			18			
Detector 3 Size(ft)			6			
Detector 3 Type			Cl+Ex			
Detector 3 Channel						
Detector 3 Extend (s)			0.0			
Turn Type	NA	pm+ov	Prot	NA	Prot	
Protected Phases	2	3	1	12	3	
Permitted Phases		2				
Detector Phase	2	3	1	2	3	
Switch Phase						

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 25: Scott Swamp Rd (RT 552) & Scott Swamp Rd (US 6)/Colt Hwy (US 6) PM Peak



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	15.0	7.0	5.0		7.0	
Minimum Split (s)	21.0	29.5	9.0		29.5	
Total Split (s)	45.0	20.0	15.0		20.0	
Total Split (%)	56.3%	25.0%	18.8%		25.0%	
Maximum Green (s)	39.0	14.5	11.0		14.5	
Yellow Time (s)	5.0	3.0	3.0		3.0	
All-Red Time (s)	1.0	2.5	1.0		2.5	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.0	5.5	4.0		5.5	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	2.0		3.0	
Recall Mode	C-Max	None	Min		None	
Walk Time (s)		23.0			23.0	
Flash Dont Walk (s)		1.0			1.0	
Pedestrian Calls (#/hr)		0			0	
Act Effct Green (s)	40.8	59.5	11.0	57.9	12.6	
Actuated g/C Ratio	0.51	0.74	0.14	0.72	0.16	
v/c Ratio	0.47	0.29	0.80	0.49	0.73	
Control Delay	18.8	1.9	58.0	5.7	40.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	18.8	1.9	58.0	5.7	40.1	
LOS	B	A	E	A	D	
Approach Delay	13.9			12.7	40.1	
Approach LOS	B			B	D	
Queue Length 50th (ft)	167	12	94	119	96	
Queue Length 95th (ft)	249	19	#202	168	140	
Internal Link Dist (ft)	1007			520	702	
Turn Bay Length (ft)		350	350		380	
Base Capacity (vph)	1824	1226	255	2584	622	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.47	0.29	0.76	0.49	0.63	

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 18 (23%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.80  
 Intersection Signal Delay: 16.7 Intersection LOS: B  
 Intersection Capacity Utilization 55.2% ICU Level of Service B  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 25: Scott Swamp Rd (RT 552) & Scott Swamp Rd (US 6)/Colt Hwy (US 6)



Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 26: Main St (RT 10) & Meadow Rd PM Peak



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3
Lane Configurations							
Traffic Volume (vph)	142	158	227	451	632	200	
Future Volume (vph)	142	158	227	451	632	200	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor				1.00	0.99		
Frt	0.929				0.968		
Flt Protected	0.977			0.984			
Satd. Flow (prot)	1707	0	0	1851	1809	0	
Flt Permitted	0.977			0.081			
Satd. Flow (perm)	1707	0	0	152	1809	0	
Right Turn on Red		No				Yes	
Satd. Flow (RTOR)					15		
Link Speed (mph)	30			30	30		
Link Distance (ft)	345			413	499		
Travel Time (s)	7.8			9.4	11.3		
Confl. Peds. (#/hr)			4			4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	
Adj. Flow (vph)	146	163	234	465	652	206	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	309	0	0	699	858	0	
Number of Detectors	2		1	1	1		
Detector Template			Left				
Leading Detector (ft)	18		20	206	206		
Trailing Detector (ft)	0		0	200	200		
Detector 1 Position(ft)	0		0	200	200		
Detector 1 Size(ft)	6		20	6	6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		
Detector 2 Position(ft)	12						
Detector 2 Size(ft)	6						
Detector 2 Type	Cl+Ex						
Detector 2 Channel							
Detector 2 Extend (s)	0.0						
Turn Type	Prot		D.P+P	NA	NA		
Protected Phases	4		1	12	2	3	
Permitted Phases			2				
Detector Phase	4		1	1	2		
Switch Phase							
Minimum Initial (s)	5.0		3.0		15.0	1.0	
Minimum Split (s)	9.0		7.0		22.2	25.0	
Total Split (s)	34.0		12.0		39.2	25.0	
Total Split (%)	30.9%		10.9%		35.6%	23%	
Maximum Green (s)	30.0		8.0		32.0	21.0	
Yellow Time (s)	3.0		3.0		4.1	4.0	

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 26: Main St (RT 10) & Meadow Rd PM Peak

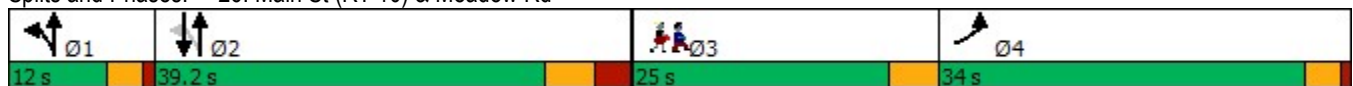


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3
All-Red Time (s)	1.0		1.0		3.1		0.0
Lost Time Adjust (s)	0.0				0.0		
Total Lost Time (s)	4.0				7.2		
Lead/Lag	Lag		Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	3.0		3.0		5.0		3.0
Recall Mode	None		Max		Min		None
Walk Time (s)							7.0
Flash Dont Walk (s)							14.0
Pedestrian Calls (#/hr)							6
Act Effct Green (s)	19.1			44.5	33.0		
Actuated g/C Ratio	0.24			0.56	0.41		
v/c Ratio	0.76			2.69	1.13		
Control Delay	41.6			785.6	100.9		
Queue Delay	0.0			0.0	0.0		
Total Delay	41.6			785.6	100.9		
LOS	D			F	F		
Approach Delay	41.6			785.6	100.9		
Approach LOS	D			F	F		
Queue Length 50th (ft)	129			~516	~441		
Queue Length 95th (ft)	293			#1105	#1115		
Internal Link Dist (ft)	265			333	419		
Turn Bay Length (ft)							
Base Capacity (vph)	663			260	758		
Starvation Cap Reductn	0			0	0		
Spillback Cap Reductn	0			0	0		
Storage Cap Reductn	0			0	0		
Reduced v/c Ratio	0.47			2.69	1.13		

Intersection Summary

Area Type: Other  
 Cycle Length: 110.2  
 Actuated Cycle Length: 79.6  
 Natural Cycle: 150  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 2.69  
 Intersection Signal Delay: 347.6 Intersection LOS: F  
 Intersection Capacity Utilization 112.0% 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.

Splits and Phases: 26: Main St (RT 10) & Meadow Rd





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	6	8	11	137	55	12
Future Volume (vph)	6	8	11	137	55	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	0.924				0.976	
Flt Protected	0.979			0.996		
Satd. Flow (prot)	1685	0	0	1855	1818	0
Flt Permitted	0.979			0.996		
Satd. Flow (perm)	1685	0	0	1855	1818	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	252			282	311	
Travel Time (s)	5.7			6.4	7.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	7	9	12	149	60	13
Shared Lane Traffic (%)						
Lane Group Flow (vph)	16	0	0	161	73	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	24.5%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	6	8	11	137	55	12
Future Vol, veh/h	6	8	11	137	55	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	9	12	149	60	13

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	240	67	73	0	0
Stage 1	67	-	-	-	-
Stage 2	173	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	748	997	1527	-	-
Stage 1	956	-	-	-	-
Stage 2	857	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	741	997	1527	-	-
Mov Cap-2 Maneuver	741	-	-	-	-
Stage 1	947	-	-	-	-
Stage 2	857	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.2	0.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1527	-	868	-	-
HCM Lane V/C Ratio	0.008	-	0.018	-	-
HCM Control Delay (s)	7.4	0	9.2	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 28: New Britain Ave & Coppermine Rd PM Peak



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	12	14	31	282	166	21
Future Volume (vph)	12	14	31	282	166	21
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	0.928			0.985		
Flt Protected	0.977			0.995		
Satd. Flow (prot)	1689			1853	1835	0
Flt Permitted	0.977			0.995		
Satd. Flow (perm)	1689			1853	1835	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	315			234	235	
Travel Time (s)	7.2			5.3	5.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	13	15	34	307	180	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	0	0	341	203	0
Sign Control	Stop			Free	Free	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	39.9%
Analysis Period (min)	15
	ICU Level of Service A

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 28: New Britain Ave & Coppermine Rd PM Peak

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	12	14	31	282	166	21
Future Vol, veh/h	12	14	31	282	166	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	15	34	307	180	23

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	567	192	203	0	-	0
Stage 1	192	-	-	-	-	-
Stage 2	375	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	485	850	1369	-	-	-
Stage 1	841	-	-	-	-	-
Stage 2	695	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	470	850	1369	-	-	-
Mov Cap-2 Maneuver	470	-	-	-	-	-
Stage 1	816	-	-	-	-	-
Stage 2	695	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.1	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1369	-	619	-	-
HCM Lane V/C Ratio	0.025	-	0.046	-	-
HCM Control Delay (s)	7.7	0	11.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Farmington Connectivity Study 2050 Scenario 3 (Route 177 Closed & No Build) Conditions  
 29: Whispering Rod Rd/Chaffee Ln & W District Rd PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	27	71	4	11	177	22	4	0	5	26	2	29
Future Volume (vph)	27	71	4	11	177	22	4	0	5	26	2	29
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	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.986			0.925			0.930	
Flt Protected		0.987			0.997			0.978			0.978	
Satd. Flow (prot)	0	1829	0	0	1831	0	0	1685	0	0	1694	0
Flt Permitted		0.987			0.997			0.978			0.978	
Satd. Flow (perm)	0	1829	0	0	1831	0	0	1685	0	0	1694	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		304			314			232			240	
Travel Time (s)		6.9			7.1			5.3			5.5	
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
Adj. Flow (vph)	29	77	4	12	192	24	4	0	5	28	2	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	110	0	0	228	0	0	9	0	0	62	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	25.6%
Analysis Period (min)	15
	ICU Level of Service A

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	27	71	4	11	177	22	4	0	5	26	2	29
Future Vol, veh/h	27	71	4	11	177	22	4	0	5	26	2	29
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	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	77	4	12	192	24	4	0	5	28	2	32
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	8.6	7.6	7.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	44%	26%	5%	46%
Vol Thru, %	0%	70%	84%	4%
Vol Right, %	56%	4%	10%	51%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	9	102	210	57
LT Vol	4	27	11	26
Through Vol	0	71	177	2
RT Vol	5	4	22	29
Lane Flow Rate	10	111	228	62
Geometry Grp	1	1	1	1
Degree of Util (X)	0.012	0.134	0.259	0.077
Departure Headway (Hd)	4.506	4.363	4.092	4.472
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	798	827	867	805
Service Time	2.514	2.363	2.172	2.477
HCM Lane V/C Ratio	0.013	0.134	0.263	0.077
HCM Control Delay	7.6	8	8.6	7.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0.5	1	0.2

Farmington Connectivity Study  
 1: Canton Rd (RT 179) & Spielman Hwy (RT 4)

2050 Scenario 4 (Route 177 & Build) Conditions  
 AM PEAK



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	302	431	215	219	348	211
Future Volume (vph)	302	431	215	219	348	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260	0	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98				
Frt		0.850			0.949	
Flt Protected	0.950			0.976		
Satd. Flow (prot)	1770	1583	0	1818	1768	0
Flt Permitted	0.950			0.424		
Satd. Flow (perm)	1770	1547	0	790	1768	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		400			48	
Link Speed (mph)	35			50	50	
Link Distance (ft)	986			565	665	
Travel Time (s)	19.2			7.7	9.1	
Confl. Peds. (#/hr)		1				
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	315	449	224	228	363	220
Shared Lane Traffic (%)						
Lane Group Flow (vph)	315	449	0	452	583	0
Number of Detectors	1	1	1	1	1	
Detector Template			Left			
Leading Detector (ft)	40	40	20	40	40	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	40	40	20	40	40	
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	pm+ov	D.P+P	NA	NA	
Protected Phases	4	1	1	12	2	
Permitted Phases		4	2			
Detector Phase	4	1	1	2	2	
Switch Phase						
Minimum Initial (s)	6.0	6.0	6.0		20.0	
Minimum Split (s)	17.0	10.0	10.0		26.6	
Total Split (s)	29.0	10.0	10.0		46.6	
Total Split (%)	33.9%	11.7%	11.7%		54.4%	
Maximum Green (s)	25.0	6.0	6.0		40.0	
Yellow Time (s)	3.0	3.0	3.0		5.0	
All-Red Time (s)	1.0	1.0	1.0		1.6	
Lost Time Adjust (s)	0.0	0.0			0.0	
Total Lost Time (s)	4.0	4.0			6.6	

Farmington Connectivity Study  
 1: Canton Rd (RT 179) & Spielman Hwy (RT 4)

2050 Scenario 4 (Route 177 & Build) Conditions  
 AM PEAK

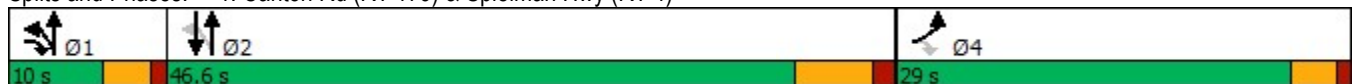


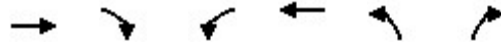
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	1.0	3.0	3.0		5.0	
Recall Mode	None	Min	Min		Min	
Walk Time (s)	12.0					
Flash Dont Walk (s)	1.0					
Pedestrian Calls (#/hr)	1					
Act Effct Green (s)	17.1	23.1		48.8	40.2	
Actuated g/C Ratio	0.22	0.30		0.63	0.52	
v/c Ratio	0.81	0.61		0.79	0.62	
Control Delay	45.8	6.9		21.8	17.0	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	45.8	6.9		21.8	17.0	
LOS	D	A		C	B	
Approach Delay	22.9			21.8	17.0	
Approach LOS	C			C	B	
Queue Length 50th (ft)	145	16		80	173	
Queue Length 95th (ft)	232	78		#239	338	
Internal Link Dist (ft)	906			485	585	
Turn Bay Length (ft)	260					
Base Capacity (vph)	570	742		574	934	
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	0.55	0.61		0.79	0.62	

Intersection Summary

Area Type: Other  
 Cycle Length: 85.6  
 Actuated Cycle Length: 77.9  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.81  
 Intersection Signal Delay: 20.7  
 Intersection LOS: C  
 Intersection Capacity Utilization 83.5%  
 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: 1: Canton Rd (RT 179) & Spielman Hwy (RT 4)





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	↔
Traffic Volume (vph)	619	118	485	407	52	388
Future Volume (vph)	619	118	485	407	52	388
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	60
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.978					0.850
Flt Protected				0.974	0.950	
Satd. Flow (prot)	1804	0	0	1797	1752	1568
Flt Permitted				0.974	0.950	
Satd. Flow (perm)	1804	0	0	1797	1752	1568
Link Speed (mph)	30			30	25	
Link Distance (ft)	740			816	860	
Travel Time (s)	16.8			18.5	23.5	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	638	122	500	420	54	400
Shared Lane Traffic (%)						
Lane Group Flow (vph)	760	0	0	920	54	400
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	101.3%
ICU Level of Service	G
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	63.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	619	118	485	407	52	388
Future Vol, veh/h	619	118	485	407	52	388
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	60
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	638	122	500	420	54	400

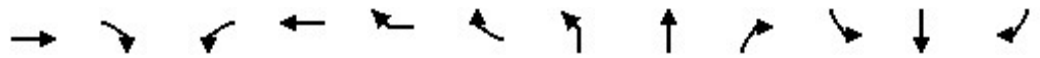
Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	760	0	2119 699
Stage 1	-	-	-	-	699 -
Stage 2	-	-	-	-	1420 -
Critical Hdwy	-	-	4.13	-	6.43 6.23
Critical Hdwy Stg 1	-	-	-	-	5.43 -
Critical Hdwy Stg 2	-	-	-	-	5.43 -
Follow-up Hdwy	-	-	2.227	-	3.527 3.327
Pot Cap-1 Maneuver	-	-	847	-	55 438
Stage 1	-	-	-	-	491 -
Stage 2	-	-	-	-	222 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	847	-	~ 13 438
Mov Cap-2 Maneuver	-	-	-	-	~ 13 -
Stage 1	-	-	-	-	491 -
Stage 2	-	-	-	-	~ 51 -

Approach	EB	WB	NB
HCM Control Delay, s	0	8.3	283.5
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	13	438	-	-	847	-
HCM Lane V/C Ratio	4.124	0.913	-	-	0.59	-
HCM Control Delay (s)	\$ 1988.7	55	-	-	15.2	0
HCM Lane LOS	F	F	-	-	C	A
HCM 95th %tile Q(veh)	7.7	10.1	-	-	4	-

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

Farmington Connectivity Study 2050 Scenario 4 (Route 177 & Build) Conditions  
 3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



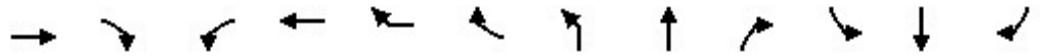
Lane Group	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑			↑	↑		↑	↑	↑	↑	↑	↑
Traffic Volume (vph)	122	2	1	36	234	44	0	0	0	75	1	2
Future Volume (vph)	122	2	1	36	234	44	0	0	0	75	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		50	0		0		0		145	110		60
Storage Lanes		1	0		1		1		1	1		1
Taper Length (ft)			25				25			50		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor	1.00			1.00								0.98
Frt	0.998				0.850							0.900
Flt Protected				0.999						0.950		
Satd. Flow (prot)	3531	0	0	1861	1583	0	1863	1863	1863	1770	1567	0
Flt Permitted				0.993						0.757		
Satd. Flow (perm)	3531	0	0	1850	1583	0	1863	1863	1863	1410	1567	0
Right Turn on Red		No				No			Yes			
Satd. Flow (RTOR)												
Link Speed (mph)	25			30				25				35
Link Distance (ft)	761			292				461				785
Travel Time (s)	20.8			6.6				12.6				15.3
Confl. Peds. (#/hr)		3	3				1					1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	130	2	1	38	249	47	0	0	0	80	1	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	132	0	0	39	296	0	0	0	0	80	3	0
Number of Detectors	1		1	1	1		1	0	0	1	1	
Detector Template			Left									
Leading Detector (ft)	44		20	44	44		44	0	0	44	206	
Trailing Detector (ft)	-6		0	-6	-6		-6	0	0	-6	200	
Detector 1 Position(ft)	-6		0	-6	-6		-6	0	0	-6	200	
Detector 1 Size(ft)	50		20	50	50		50	6	20	50	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	NA		Perm	NA	pt+ov		D.P+P		Free	Perm	NA	
Protected Phases	4			4	4 5		1	1 2				2
Permitted Phases			4				2		Free	2		
Detector Phase	4		4	4	4		1	2		2	2	
Switch Phase												
Minimum Initial (s)	9.0		9.0	9.0			5.0			15.0	15.0	
Minimum Split (s)	14.0		14.0	14.0			9.0			21.0	21.0	
Total Split (s)	28.0		28.0	28.0			9.0			22.0	22.0	
Total Split (%)	22.6%		22.6%	22.6%			7.3%			17.7%	17.7%	
Maximum Green (s)	23.0		23.0	23.0			5.0			16.0	16.0	
Yellow Time (s)	4.0		4.0	4.0			3.0			4.0	4.0	
All-Red Time (s)	1.0		1.0	1.0			1.0			2.0	2.0	
Lost Time Adjust (s)	0.0			0.0			0.0			0.0	0.0	
Total Lost Time (s)	5.0			5.0			4.0			6.0	6.0	

Farmington Connectivity Study 2050 Scenario 4 (Route 177 & Build) Conditions  
 3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



Lane Group	SBR2	SEL2	SEL	SER	SER2	Ø3
Lane Configurations						
Traffic Volume (vph)	3	5	376	1	2	
Future Volume (vph)	3	5	376	1	2	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	
Storage Length (ft)			0	255		
Storage Lanes			1	1		
Taper Length (ft)			25			
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	
Ped Bike Factor						
Frt	0.850			0.850		
Flt Protected			0.950			
Satd. Flow (prot)	1504	0	1770	1583	0	
Flt Permitted			0.995			
Satd. Flow (perm)	1504	0	1853	1583	0	
Right Turn on Red	Yes				No	
Satd. Flow (RTOR)	185					
Link Speed (mph)			30			
Link Distance (ft)			820			
Travel Time (s)			18.6			
Confl. Peds. (#/hr)				3	1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	3	5	400	1	2	
Shared Lane Traffic (%)	10%					
Lane Group Flow (vph)	3	0	405	3	0	
Number of Detectors	0	1	1	1		
Detector Template		Left				
Leading Detector (ft)	0	20	44	44		
Trailing Detector (ft)	0	0	-6	-6		
Detector 1 Position(ft)	0	0	-6	-6		
Detector 1 Size(ft)	20	20	50	50		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		
Turn Type	Free	D.Pm	Prot	Prot		
Protected Phases			5	5	3	
Permitted Phases	Free	5				
Detector Phase		5	5	5		
Switch Phase						
Minimum Initial (s)		9.0	9.0	9.0	1.0	
Minimum Split (s)		14.0	14.0	14.0	23.0	
Total Split (s)		42.0	42.0	42.0	23.0	
Total Split (%)		33.9%	33.9%	33.9%	19%	
Maximum Green (s)		37.0	37.0	37.0	19.0	
Yellow Time (s)		4.0	4.0	4.0	4.0	
All-Red Time (s)		1.0	1.0	1.0	0.0	
Lost Time Adjust (s)			0.0	0.0		
Total Lost Time (s)			5.0	5.0		

Farmington Connectivity Study 2050 Scenario 4 (Route 177 & Build) Conditions  
 3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)

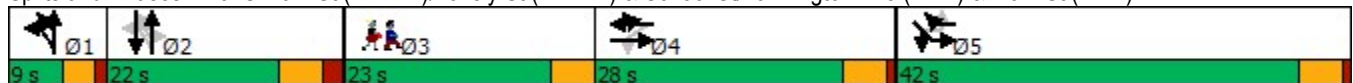


Lane Group	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT	SBR
Lead/Lag	Lag		Lag	Lag				Lead			Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes				Yes			Yes	Yes
Vehicle Extension (s)	1.5		1.5	1.5				1.5			2.5	2.5
Recall Mode	None		None	None				None			Min	Min
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	12.1		12.1		36.2					16.3	16.3	
Actuated g/C Ratio	0.18		0.18		0.54					0.24	0.24	
v/c Ratio	0.21		0.12		0.35					0.23	0.01	
Control Delay	27.6		28.6		10.5					30.1	31.3	
Queue Delay	0.0		0.0		0.0					0.0	0.0	
Total Delay	27.6		28.6		10.5					30.1	31.3	
LOS	C		C		B					C	C	
Approach Delay	27.6		12.6								29.1	
Approach LOS	C		B								C	
Queue Length 50th (ft)	20		11		51					21	1	
Queue Length 95th (ft)	70		54		165					104	11	
Internal Link Dist (ft)	681		212					381			705	
Turn Bay Length (ft)										110		
Base Capacity (vph)	1311		687		843					364	405	
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	0.10		0.06		0.35					0.22	0.01	

Intersection Summary

Area Type:	Other
Cycle Length:	124
Actuated Cycle Length:	67.2
Natural Cycle:	85
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.78
Intersection Signal Delay:	25.7
Intersection LOS:	C
Intersection Capacity Utilization:	54.4%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



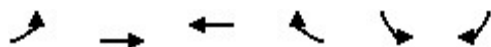
Farmington Connectivity Study 2050 Scenario 4 (Route 177 & Build) Conditions  
 3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



Lane Group	SBR2	SEL2	SEL	SER	SER2	Ø3
Lead/Lag						Lead
Lead-Lag Optimize?						Yes
Vehicle Extension (s)		1.5	1.5	1.5		3.0
Recall Mode		None	None	None		None
Walk Time (s)						7.0
Flash Dont Walk (s)						12.0
Pedestrian Calls (#/hr)						4
Act Effct Green (s)	67.2		18.7	18.7		
Actuated g/C Ratio	1.00		0.28	0.28		
v/c Ratio	0.00		0.78	0.01		
Control Delay	0.0		35.1	20.7		
Queue Delay	0.0		0.0	0.0		
Total Delay	0.0		35.1	20.7		
LOS	A		D	C		
Approach Delay			35.0			
Approach LOS			D			
Queue Length 50th (ft)	0		126	1		
Queue Length 95th (ft)	0		363	8		
Internal Link Dist (ft)			740			
Turn Bay Length (ft)	60			255		
Base Capacity (vph)	1504		1107	946		
Starvation Cap Reductn	0		0	0		
Spillback Cap Reductn	0		0	0		
Storage Cap Reductn	0		0	0		
Reduced v/c Ratio	0.00		0.37	0.00		
<b>Intersection Summary</b>						

Farmington Connectivity Study  
 4: Farmington Ave (RT 4) & W Avon Rd (RT 167)

2050 Scenario 4 (Route 177 & Build) Conditions  
 AM PEAK

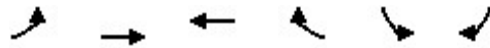


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3
Lane Configurations							
Traffic Volume (vph)	114	768	571	163	134	59	
Future Volume (vph)	114	768	571	163	134	59	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	365			0	0	0	
Storage Lanes	1			0	1	0	
Taper Length (ft)	50				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor					1.00		
Frt			0.970		0.959		
Flt Protected	0.950				0.966		
Satd. Flow (prot)	1770	1863	1807	0	1726	0	
Flt Permitted	0.159				0.966		
Satd. Flow (perm)	296	1863	1807	0	1717	0	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			14		18		
Link Speed (mph)		30	35		30		
Link Distance (ft)		1079	965		1192		
Travel Time (s)		24.5	18.8		27.1		
Confl. Peds. (#/hr)					3		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	
Adj. Flow (vph)	118	792	589	168	138	61	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	118	792	757	0	199	0	
Number of Detectors	1	2	2		1		
Detector Template							
Leading Detector (ft)	24	246	246		24		
Trailing Detector (ft)	-6	120	120		-6		
Detector 1 Position(ft)	-6	120	120		-6		
Detector 1 Size(ft)	30	6	6		30		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		
Detector 2 Position(ft)		240	240				
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.P+P	NA	NA		Prot		
Protected Phases	1	1 2	2		4		3
Permitted Phases	2						
Detector Phase	1	2	2		4		
Switch Phase							
Minimum Initial (s)	5.0		15.0		7.0		1.0
Minimum Split (s)	9.5		22.5		22.5		23.0
Total Split (s)	19.0		44.5		28.0		23.0
Total Split (%)	16.6%		38.9%		24.5%		20%

Farmington Connectivity Study  
 4: Farmington Ave (RT 4) & W Avon Rd (RT 167)

2050 Scenario 4 (Route 177 & Build) Conditions

AM PEAK



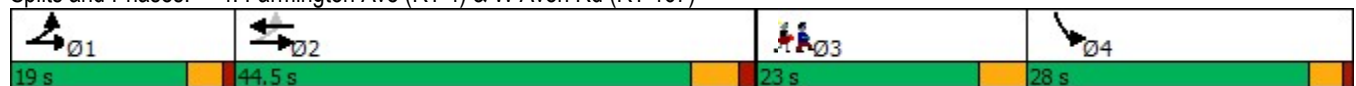
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3
Maximum Green (s)	15.0		39.0		24.0		19.0
Yellow Time (s)	3.0		4.0		3.0		4.0
All-Red Time (s)	1.0		1.5		1.0		0.0
Lost Time Adjust (s)	0.0		0.0		0.0		
Total Lost Time (s)	4.0		5.5		4.0		
Lead/Lag	Lead		Lag		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	1.5		2.5		2.0		3.0
Recall Mode	None		Min		None		None
Walk Time (s)							7.0
Flash Dont Walk (s)							11.0
Pedestrian Calls (#/hr)							9
Act Effct Green (s)	48.6	52.7	40.3		12.9		
Actuated g/C Ratio	0.63	0.68	0.52		0.17		
v/c Ratio	0.38	0.62	0.79		0.66		
Control Delay	10.6	12.8	26.0		39.3		
Queue Delay	0.0	0.0	0.0		0.0		
Total Delay	10.6	12.8	26.0		39.3		
LOS	B	B	C		D		
Approach Delay		12.5	26.0		39.3		
Approach LOS		B	C		D		
Queue Length 50th (ft)	12	135	225		74		
Queue Length 95th (ft)	72	626	#851		189		
Internal Link Dist (ft)		999	885		1112		
Turn Bay Length (ft)	365						
Base Capacity (vph)	499	1275	953		568		
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	0.24	0.62	0.79		0.35		

Intersection Summary

Area Type: Other  
 Cycle Length: 114.5  
 Actuated Cycle Length: 77  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 20.9  
 Intersection LOS: C  
 Intersection Capacity Utilization 68.6%  
 ICU Level of Service C  
 Analysis Period (min) 15

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

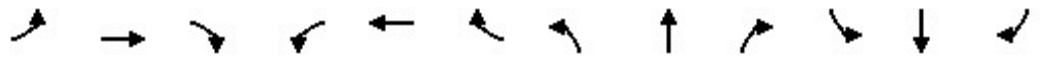
Splits and Phases: 4: Farmington Ave (RT 4) & W Avon Rd (RT 167)



Farmington Connectivity Study  
 5: Montieth Dr/Monteith Dr & Farmington Ave (RT 4)

2050 Scenario 4 (Route 177 & Build) Conditions

AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	254	345	394	265	356	320	268	188	318	99	126	107
Future Volume (vph)	254	345	394	265	356	320	268	188	318	99	126	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120		0	280		55	245		75	0		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						0.98						
Frt		0.928				0.850			0.850		0.923	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1729	0	1770	1863	1583	1770	1863	1583	1770	1719	0
Flt Permitted	0.270			0.108			0.186			0.630		
Satd. Flow (perm)	503	1729	0	201	1863	1557	346	1863	1583	1174	1719	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		52				161			312		49	
Link Speed (mph)		35			35			30			25	
Link Distance (ft)		784			925			1044			548	
Travel Time (s)		15.3			18.0			23.7			14.9	
Confl. Peds. (#/hr)	3					3						
Peak Hour Factor	0.74	0.74	0.92	0.92	0.74	0.74	0.92	0.92	0.92	0.74	0.92	0.74
Adj. Flow (vph)	343	466	428	288	481	432	291	204	346	134	137	145
Shared Lane Traffic (%)												
Lane Group Flow (vph)	343	894	0	288	481	432	291	204	346	134	282	0
Number of Detectors	1	0		1	1	1	1	2	1	3	2	
Detector Template	Left			Left		Right	Left	Thru	Right		Thru	
Leading Detector (ft)	20	0		20	356	20	20	100	20	24	100	
Trailing Detector (ft)	0	0		0	350	0	0	0	0	-6	0	
Detector 1 Position(ft)	0	0		0	350	0	0	0	0	-6	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)								94		6	94	
Detector 2 Size(ft)								6		6	6	
Detector 2 Type								Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0		0.0	0.0	
Detector 3 Position(ft)										18		
Detector 3 Size(ft)										6		
Detector 3 Type										Cl+Ex		
Detector 3 Channel												
Detector 3 Extend (s)										0.0		
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2		2	8		8	4		
Detector Phase	1	6		5	2	2	3	8	8	7	4	

Farmington Connectivity Study  
 5: Montieth Dr/Monteith Dr & Farmington Ave (RT 4)

2050 Scenario 4 (Route 177 & Build) Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
<b>Switch Phase</b>												
Minimum Initial (s)	5.0	5.0		5.0	15.0	15.0	5.0	15.0	15.0	5.0	5.0	
Minimum Split (s)	9.0	22.5		9.5	23.4	23.4	9.5	23.4	23.4	16.0	22.5	
Total Split (s)	15.0	41.0		15.0	41.0	41.0	18.0	27.0	27.0	17.0	26.0	
Total Split (%)	15.0%	41.0%		15.0%	41.0%	41.0%	18.0%	27.0%	27.0%	17.0%	26.0%	
Maximum Green (s)	11.0	36.5		10.5	35.6	35.6	13.5	21.6	21.6	13.0	21.5	
Yellow Time (s)	3.0	3.5		3.5	4.4	4.4	3.5	4.4	4.4	3.0	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.5		4.5	5.4	5.4	4.5	5.4	5.4	4.0	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	1.5	3.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None	None	None	None	
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		3			3	3		3	3		3	
Act Effct Green (s)	50.3	36.5		51.5	36.8	36.8	35.1	21.8	21.8	27.7	17.9	
Actuated g/C Ratio	0.50	0.36		0.52	0.37	0.37	0.35	0.22	0.22	0.28	0.18	
v/c Ratio	0.81	1.35		0.89	0.70	0.64	0.93	0.50	0.59	0.35	0.81	
Control Delay	33.2	193.4		56.3	34.0	21.3	62.9	38.9	10.1	24.0	50.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	33.2	193.4		56.3	34.0	21.3	62.9	38.9	10.1	24.0	50.2	
LOS	C	F		E	C	C	E	D	B	C	D	
Approach Delay		149.0			34.8			35.4			41.8	
Approach LOS		F			C			D			D	
Queue Length 50th (ft)	117	~733		133	263	143	138	113	17	57	143	
Queue Length 95th (ft)	#152	#714		#327	289	171	#287	187	100	77	230	
Internal Link Dist (ft)		704			845			964			468	
Turn Bay Length (ft)	120			280		55	245		75			
Base Capacity (vph)	421	664		324	686	674	313	418	597	446	408	
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	0.81	1.35		0.89	0.70	0.64	0.93	0.49	0.58	0.30	0.69	

**Intersection Summary**

Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 16 (16%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.35  
 Intersection Signal Delay: 73.9  
 Intersection LOS: E  
 Intersection Capacity Utilization 100.0%  
 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.

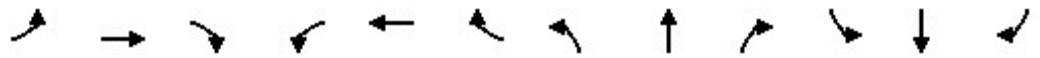
Splits and Phases: 5: Montieth Dr/Monteith Dr & Farmington Ave (RT 4)



Farmington Connectivity Study  
 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)

2050 Scenario 4 (Route 177 & Build) Conditions

AM PEAK

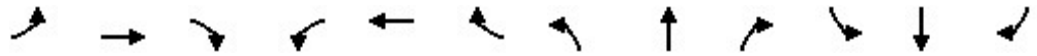


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	636	22	57	577	168	23	3	37	433	38	94
Future Volume (vph)	65	636	22	57	577	168	23	3	37	433	38	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90		0	90		90	0		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	65			110			25			50		
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								0.97		1.00		
Frt		0.995				0.850		0.860				0.893
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1719	1800	0	1719	1810	1538	1719	1513	0	1719	1616	0
Flt Permitted	0.105			0.122			0.451			0.728		
Satd. Flow (perm)	190	1800	0	221	1810	1538	816	1513	0	1312	1616	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				166		41				77
Link Speed (mph)		40			40			30				35
Link Distance (ft)		635			779			428				768
Travel Time (s)		10.8			13.3			9.7				15.0
Confl. Peds. (#/hr)									2	2		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	71	699	24	63	634	185	25	3	41	476	42	103
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	723	0	63	634	185	25	44	0	476	145	0
Number of Detectors	1	2		1	2	0	1	1		1	1	
Detector Template												
Leading Detector (ft)	40	256		45	336	0	45	40		40	40	
Trailing Detector (ft)	-10	150		-5	230	0	-5	-10		-10	-10	
Detector 1 Position(ft)	-10	150		-5	230	0	-5	-10		-10	-10	
Detector 1 Size(ft)	50	6		50	6	20	50	50		50	50	
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)		250			330							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA		pm+pt	NA	Prot	pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2	2	7	8		7	8	
Permitted Phases	6			2			8			8		
Detector Phase	1	1		5	2	2	7	8		7	8	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	5.0	7.0		5.0	7.0	
Minimum Split (s)	10.4	22.0		10.4	22.0	22.0	10.9	14.0		10.9	14.0	
Total Split (s)	15.0	43.0		15.0	43.0	43.0	22.0	20.0		22.0	20.0	

Lane Group	Ø3
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)	
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	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	27.0
Total Split (s)	27.0

Farmington Connectivity Study  
 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)

2050 Scenario 4 (Route 177 & Build) Conditions  
 AM PEAK










Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	11.8%	33.9%		11.8%	33.9%	33.9%	17.3%	15.7%		17.3%	15.7%	
Maximum Green (s)	9.6	36.0		9.6	36.0	36.0	16.1	13.0		16.1	13.0	
Yellow Time (s)	4.4	5.0		4.4	5.0	5.0	3.0	4.1		3.0	4.1	
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	2.9	2.9		2.9	2.9	
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)	5.4	7.0		5.4	7.0	7.0	5.9	7.0		5.9	7.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	54.5	43.8		44.9	36.0	36.0	48.4	10.1		48.4	10.1	
Actuated g/C Ratio	0.43	0.34		0.35	0.28	0.28	0.38	0.08		0.38	0.08	
v/c Ratio	0.30	1.16		0.38	1.24	0.33	0.04	0.28		0.77	0.73	
Control Delay	25.1	129.1		28.9	161.1	8.7	25.2	21.8		40.5	48.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	25.1	129.1		28.9	161.1	8.7	25.2	21.8		40.5	48.2	
LOS	C	F		C	F	A	C	C		D	D	
Approach Delay		119.8			119.7			23.0			42.3	
Approach LOS		F			F			C			D	
Queue Length 50th (ft)	34	~741		30	~645	11	11	2		278	55	
Queue Length 95th (ft)	67	#1046		61	#878	69	38	40		#587	125	
Internal Link Dist (ft)		555			699			348			688	
Turn Bay Length (ft)	90			90		90				150		
Base Capacity (vph)	237	621		195	513	554	575	191		619	234	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.30	1.16		0.32	1.24	0.33	0.04	0.23		0.77	0.62	

Intersection Summary

Area Type: Other  
 Cycle Length: 127  
 Actuated Cycle Length: 127  
 Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 145  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.24  
 Intersection Signal Delay: 96.6  
 Intersection LOS: F  
 Intersection Capacity Utilization 85.8%  
 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.

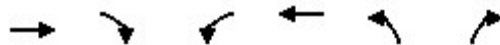
Splits and Phases: 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)

 Ø1 15 s	 Ø2 (R) 43 s	 Ø3 27 s	 Ø7 22 s	 Ø8 20 s
 Ø5 15 s	 Ø6 (R) 43 s			

Lane Group	Ø3
Total Split (%)	21%
Maximum Green (s)	23.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
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)	16.0
Pedestrian Calls (#/hr)	2
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø4
Lane Configurations	↑↑		↙	↑	↘			
Traffic Volume (vph)	1162	110	15	718	167	41		
Future Volume (vph)	1162	110	15	718	167	41		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)		0	200		0	0		
Storage Lanes		0	1		1	0		
Taper Length (ft)			50		25			
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00		
Ped Bike Factor	1.00		1.00		0.98			
Frt	0.987				0.973			
Flt Protected			0.950		0.961			
Satd. Flow (prot)	3486	0	1770	1863	1742	0		
Flt Permitted			0.153		0.961			
Satd. Flow (perm)	3486	0	285	1863	1704	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)	11				7			
Link Speed (mph)	30			30	30			
Link Distance (ft)	1042			566	488			
Travel Time (s)	23.7			12.9	11.1			
Confl. Peds. (#/hr)		5	5		8			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Adj. Flow (vph)	1223	116	16	756	176	43		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	1339	0	16	756	219	0		
Number of Detectors	0		0	0	3			
Detector Template								
Leading Detector (ft)	0		0	0	24			
Trailing Detector (ft)	0		0	0	-6			
Detector 1 Position(ft)	0		0	0	-6			
Detector 1 Size(ft)	6		20	6	6			
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel								
Detector 1 Extend (s)	0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0		0.0	0.0	0.0			
Detector 2 Position(ft)					6			
Detector 2 Size(ft)					6			
Detector 2 Type					Cl+Ex			
Detector 2 Channel								
Detector 2 Extend (s)					0.0			
Detector 3 Position(ft)					18			
Detector 3 Size(ft)					6			
Detector 3 Type					Cl+Ex			
Detector 3 Channel								
Detector 3 Extend (s)					0.0			
Turn Type	NA		Perm	NA	Prot			
Protected Phases	2 4			2	5		3	4
Permitted Phases			2					
Detector Phase	2		2	2	5			

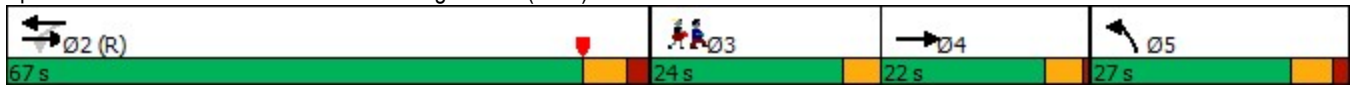


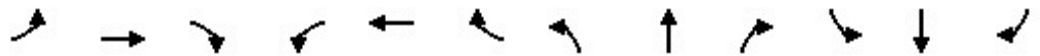
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø4
<b>Switch Phase</b>								
Minimum Initial (s)			15.0	15.0	7.0		7.0	6.0
Minimum Split (s)			22.1	22.1	13.3		24.0	10.8
Total Split (s)			67.0	67.0	27.0		24.0	22.0
Total Split (%)			47.9%	47.9%	19.3%		17%	16%
Maximum Green (s)			59.9	59.9	20.7		20.0	17.2
Yellow Time (s)			4.6	4.6	4.5		4.0	3.8
All-Red Time (s)			2.5	2.5	1.8		0.0	1.0
Lost Time Adjust (s)			0.0	0.0	0.0			
Total Lost Time (s)			7.1	7.1	6.3			
<b>Lead/Lag</b>							Lead	Lag
Lead-Lag Optimize?							Yes	Yes
Vehicle Extension (s)			3.0	3.0	1.5		3.0	1.5
Recall Mode			C-Max	C-Max	None		None	None
Walk Time (s)							7.0	
Flash Dont Walk (s)							13.0	
Pedestrian Calls (#/hr)							13	
Act Effct Green (s)	95.1		95.1	95.1	21.9			
Actuated g/C Ratio	0.68		0.68	0.68	0.16			
v/c Ratio	0.56		0.08	0.60	0.79			
Control Delay	15.8		5.3	10.2	74.1			
Queue Delay	0.6		0.0	1.0	0.1			
Total Delay	16.3		5.3	11.2	74.2			
LOS	B		A	B	E			
Approach Delay	16.3			11.1	74.2			
Approach LOS	B			B	E			
Queue Length 50th (ft)	233		1	59	188			
Queue Length 95th (ft)	556		m2	m80	268			
Internal Link Dist (ft)	962			486	408			
Turn Bay Length (ft)			200					
Base Capacity (vph)	2370		193	1265	297			
Starvation Cap Reductn	0		0	268	0			
Spillback Cap Reductn	567		0	0	1			
Storage Cap Reductn	0		0	0	0			
Reduced v/c Ratio	0.74		0.08	0.76	0.74			

**Intersection Summary**

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	140
Offset:	40 (29%), Referenced to phase 2:EBWB, Start of Yellow
Natural Cycle:	100
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.79
Intersection Signal Delay:	20.0
Intersection LOS:	C
Intersection Capacity Utilization:	60.7%
ICU Level of Service:	B
Analysis Period (min):	15
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 7: Garden St & Farmington Ave (RT 4)





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	1150	122	54	574	242	92	135	122	260	126	20
Future Volume (vph)	11	1150	122	54	574	242	92	135	122	260	126	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	255		0	100		50	0		0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (ft)	65			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.956				0.850		0.993	
Flt Protected	0.950			0.950			0.950				0.969	
Satd. Flow (prot)	1770	3539	1583	1770	1781	0	1770	1863	1583	0	1792	0
Flt Permitted	0.087			0.078			0.950				0.969	
Satd. Flow (perm)	162	3539	1583	145	1781	0	1770	1863	1583	0	1792	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		566			848			677			693	
Travel Time (s)		12.9			19.3			15.4			15.8	
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)	12	1250	133	59	624	263	100	147	133	283	137	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	1250	133	59	887	0	100	147	133	0	442	0
Number of Detectors	3	3	4	1	1		3	3	2	1	2	
Detector Template											Left	
Leading Detector (ft)	30	30	36	34	34		30	30	48	20	48	
Trailing Detector (ft)	0	0	-6	0	0		0	0	0	0	-6	
Detector 1 Position(ft)	0	0	-6	0	0		0	0	0	0	-6	
Detector 1 Size(ft)	6	6	6	34	34		6	6	12	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	12	12	6				12	12	18		6	
Detector 2 Size(ft)	6	6	6				6	6	30		42	
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0	0.0				0.0	0.0	0.0		0.0	
Detector 3 Position(ft)	24	24	18				24	24				
Detector 3 Size(ft)	6	6	6				6	6				
Detector 3 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex				
Detector 3 Channel												
Detector 3 Extend (s)	0.0	0.0	0.0				0.0	0.0				
Detector 4 Position(ft)			30									
Detector 4 Size(ft)			6									
Detector 4 Type			Cl+Ex									
Detector 4 Channel												
Detector 4 Extend (s)			0.0									
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Split	NA	pt+ov	Split	NA	

Lane Group	Ø3
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)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Detector 4 Position(ft)	
Detector 4 Size(ft)	
Detector 4 Type	
Detector 4 Channel	
Detector 4 Extend (s)	
Turn Type	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	1	6		5	2		7	7	5 7	4	4	
Permitted Phases	6		6	2								
Detector Phase	1	6	6	5	2		7	7	7	4	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	7.0	20.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	9.5	27.3	27.3	12.0	27.3		13.0	13.0		22.5	22.5	
Total Split (s)	13.0	48.0	48.0	13.0	48.0		21.0	21.0		34.0	34.0	
Total Split (%)	9.3%	34.3%	34.3%	9.3%	34.3%		15.0%	15.0%		24.3%	24.3%	
Maximum Green (s)	9.0	40.7	40.7	8.0	40.7		15.0	15.0		28.3	28.3	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	2.8	2.8	2.0	2.8		3.0	3.0		2.7	2.7	
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	7.3	7.3	5.0	7.3		6.0	6.0				5.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag					Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None		None	None	
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										5.0	5.0	
Pedestrian Calls (#/hr)										0	0	
Act Effct Green (s)	54.5	47.1	47.1	58.7	53.3		15.5	15.5	26.5			48.4
Actuated g/C Ratio	0.39	0.34	0.34	0.42	0.38		0.11	0.11	0.19			0.35
v/c Ratio	0.10	1.05	0.25	0.40	1.31		0.51	0.71	0.44			0.71
Control Delay	14.8	74.3	24.2	33.3	181.8		67.0	78.4	53.2			47.9
Queue Delay	0.0	8.4	0.0	0.0	0.0		0.0	0.0	0.0			0.0
Total Delay	14.8	82.7	24.2	33.3	181.8		67.0	78.4	53.2			47.9
LOS	B	F	C	C	F		E	E	D			D
Approach Delay		76.6			172.5			66.6				47.9
Approach LOS		E			F			E				D
Queue Length 50th (ft)	6	~657	89	31	~976		87	131	106			358
Queue Length 95th (ft)	m4	#857	m88	m38	#1401		144	201	165			482
Internal Link Dist (ft)		486			768			597				613
Turn Bay Length (ft)	100		150	255			100		50			
Base Capacity (vph)	170	1190	532	153	678		213	224	302			620
Starvation Cap Reductn	0	24	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	0.07	1.07	0.25	0.39	1.31		0.47	0.66	0.44			0.71

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	140
Offset:	31 (22%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow
Natural Cycle:	150
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.31
Intersection Signal Delay:	100.1
Intersection Capacity Utilization:	90.1%
Intersection LOS:	F
ICU Level of Service:	E

Lane Group	Ø3
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	25.0
Total Split (s)	24.0
Total Split (%)	17%
Maximum Green (s)	20.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	13.0
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	
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	
<b>Intersection Summary</b>	

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.

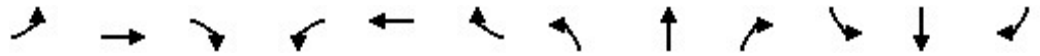
Splits and Phases: 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4)

 Ø1	 Ø2 (R)	 Ø3	 Ø4	 Ø7
13 s	48 s	24 s	34 s	21 s
 Ø5	 Ø6 (R)			
13 s	48 s			

Farmington Connectivity Study  
 9: High St/Backage Rd & Farmington Ave (RT 4)

2050 Scenario 4 (Route 177 & Build) Conditions

AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↖	↗		↕	
Traffic Volume (vph)	8	1469	34	28	887	7	31	1	175	4	0	3
Future Volume (vph)	8	1469	34	28	887	7	31	1	175	4	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	85		100	115		0	0		85	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	70			115			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.999				0.850		0.942	
Flt Protected	0.950			0.950				0.954			0.972	
Satd. Flow (prot)	1752	3494	0	1752	1843	0	0	1760	1568	0	1689	0
Flt Permitted	0.218			0.109								
Satd. Flow (perm)	402	3494	0	201	1843	0	0	1845	1568	0	1738	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		2							194			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		848			473			291			375	
Travel Time (s)		19.3			10.8			6.6			8.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	9	1632	38	31	986	8	34	1	194	4	0	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	1670	0	31	994	0	0	35	194	0	7	0
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template							Left			Left		
Leading Detector (ft)	40	40		25	25		20	35	35	20	30	
Trailing Detector (ft)	0	0		-10	-10		0	0	0	0	0	
Detector 1 Position(ft)	0	0		-10	-10		0	0	0	0	0	
Detector 1 Size(ft)	40	40		35	35		20	35	35	20	30	
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	pm+pt	NA		pm+pt	NA		D.P+P	NA	Prot	Perm	NA	
Protected Phases	1	6		5	2		4	4 7	4 7		7	
Permitted Phases	6			2			7			7		
Detector Phase	1	6		5	2		4	4	4	7	7	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		7.0			7.0	7.0	
Minimum Split (s)	9.0	21.7		9.0	21.7		11.7			12.0	12.0	
Total Split (s)	14.0	72.0		14.0	72.0		16.0			14.0	14.0	
Total Split (%)	10.0%	51.4%		10.0%	51.4%		11.4%			10.0%	10.0%	
Maximum Green (s)	10.0	65.3		10.0	65.3		11.3			9.0	9.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0			3.0	3.0	
All-Red Time (s)	1.0	2.2		1.0	2.2		1.7			2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	
Total Lost Time (s)	4.0	6.7		4.0	6.7						5.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lag					

Lane Group	Ø3
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)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	24.0
Total Split (s)	24.0
Total Split (%)	17%
Maximum Green (s)	20.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead

Farmington Connectivity Study  
 9: High St/Backage Rd & Farmington Ave (RT 4)

2050 Scenario 4 (Route 177 & Build) Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes					
Vehicle Extension (s)	1.5	2.0		1.5	2.0		2.0			2.0	2.0	
Recall Mode	None	C-Min		None	C-Min		None			None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	117.9	112.2		119.7	115.9			10.9	10.9			7.0
Actuated g/C Ratio	0.84	0.80		0.86	0.83			0.08	0.08			0.05
v/c Ratio	0.02	0.60		0.14	0.65			0.24	0.65			0.08
Control Delay	1.9	9.7		3.6	9.3			61.9	17.4			65.7
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0			0.0
Total Delay	1.9	9.8		3.6	9.3			61.9	17.4			65.7
LOS	A	A		A	A			E	B			E
Approach Delay		9.7			9.1			24.2				65.7
Approach LOS		A			A			C				E
Queue Length 50th (ft)	0	149		2	189			31	0			6
Queue Length 95th (ft)	m1	m194		14	798			60	68			23
Internal Link Dist (ft)		768			393			211				295
Turn Bay Length (ft)	85			115					85			
Base Capacity (vph)	442	2800		283	1525			184	331			111
Starvation Cap Reductn	0	104		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	0.02	0.62		0.11	0.65			0.19	0.59			0.06

Intersection Summary

Area Type: Other  
 Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 55 (39%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 130  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.65  
 Intersection Signal Delay: 10.8 Intersection LOS: B  
 Intersection Capacity Utilization 72.0% ICU Level of Service C  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: High St/Backage Rd & Farmington Ave (RT 4)

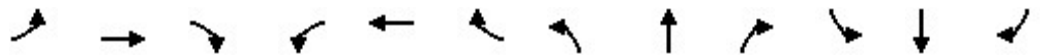


Lane Group	Ø3
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	13.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
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	
<b>Intersection Summary</b>	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	5	1	0	77	3	64	2	497	144	147	504	3
Future Volume (vph)	5	1	0	77	3	64	2	497	144	147	504	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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00			1.00			1.00	
Frt					0.940			0.970			0.999	
Flt Protected		0.959			0.974						0.989	
Satd. Flow (prot)	0	1703	0	0	1626	0	0	1722	0	0	1754	0
Flt Permitted		0.829			0.829			0.999			0.645	
Satd. Flow (perm)	0	1472	0	0	1382	0	0	1721	0	0	1144	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					31			15				
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		360			802			2590			707	
Travel Time (s)		8.2			18.2			44.1			12.1	
Confl. Peds. (#/hr)			1	1			1					1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Adj. Flow (vph)	6	1	0	91	4	75	2	585	169	173	593	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	7	0	0	170	0	0	756	0	0	770	0
Number of Detectors	1	1		1	1		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	22		20	22		20	206		20	206	
Trailing Detector (ft)	0	-10		0	-10		0	100		0	100	
Detector 1 Position(ft)	0	-10		0	-10		0	100		0	100	
Detector 1 Size(ft)	20	32		20	32		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)								200			200	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		D.P+P	NA	
Protected Phases		4			4			2		1	12	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		1	1	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0		5.0		
Minimum Split (s)	12.0	12.0		12.0	12.0		21.6	21.6		9.0		
Total Split (s)	30.0	30.0		30.0	30.0		51.6	51.6		12.0		
Total Split (%)	26.0%	26.0%		26.0%	26.0%		44.6%	44.6%		10.4%		
Maximum Green (s)	25.0	25.0		25.0	25.0		45.0	45.0		8.0		
Yellow Time (s)	3.3	3.3		3.3	3.3		4.2	4.2		3.0		

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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)	
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	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	22.0
Total Split (s)	22.0
Total Split (%)	19%
Maximum Green (s)	18.0
Yellow Time (s)	4.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	1.7	1.7		1.7	1.7		2.4	2.4		1.0		
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.0			5.0			6.6				
Lead/Lag	Lag	Lag		Lag	Lag		Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes		
Vehicle Extension (s)	1.5	1.5		1.5	1.5		2.5	2.5		3.0		
Recall Mode	None	None		None	None		Min	Min		None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		13.1			13.1			46.0				56.8
Actuated g/C Ratio		0.15			0.15			0.53				0.66
v/c Ratio		0.03			0.72			0.82				0.95
Control Delay		33.2			47.0			28.5				38.0
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		33.2			47.0			28.5				38.0
LOS		C			D			C				D
Approach Delay		33.2			47.0			28.5				38.0
Approach LOS		C			D			C				D
Queue Length 50th (ft)		3			68			274				146
Queue Length 95th (ft)		16			153			#786				#875
Internal Link Dist (ft)		280			722			2510				627
Turn Bay Length (ft)												
Base Capacity (vph)		434			430			921				809
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		0.02			0.40			0.82				0.95

Intersection Summary

Area Type: Other  
 Cycle Length: 115.6  
 Actuated Cycle Length: 86.5  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.95  
 Intersection Signal Delay: 34.7  
 Intersection LOS: C  
 Intersection Capacity Utilization 91.0%  
 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: 10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd

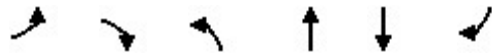


Lane Group	Ø3
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	5
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	

Farmington Connectivity Study  
 11: Harris Rd/W Avon Rd (RT 167) & W Avon Rd (RT167)

2050 Scenario 4 (Route 177 & Build) Conditions

AM PEAK



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	310	134	36	201	404	96
Future Volume (vph)	310	134	36	201	404	96
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	0.959			0.974		
Flt Protected	0.966			0.992		
Satd. Flow (prot)	1726	0	0	1848	1814	0
Flt Permitted	0.966			0.992		
Satd. Flow (perm)	1726	0	0	1848	1814	0
Link Speed (mph)	40			30	40	
Link Distance (ft)	781			809	2590	
Travel Time (s)	13.3			18.4	44.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	333	144	39	216	434	103
Shared Lane Traffic (%)						
Lane Group Flow (vph)	477	0	0	255	537	0
Sign Control	Stop			Stop	Stop	

Intersection Summary

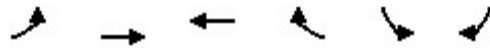
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	73.2%
ICU Level of Service	D
Analysis Period (min)	15

Intersection	
Intersection Delay, s/veh	32
Intersection LOS	D

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑	↑	
Traffic Vol, veh/h	310	134	36	201	404	96
Future Vol, veh/h	310	134	36	201	404	96
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	333	144	39	216	434	103
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	32.7	15.4	39.2
HCM LOS	D	C	E

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	15%	70%	0%
Vol Thru, %	85%	0%	81%
Vol Right, %	0%	30%	19%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	237	444	500
LT Vol	36	310	0
Through Vol	201	0	404
RT Vol	0	134	96
Lane Flow Rate	255	477	538
Geometry Grp	1	1	1
Degree of Util (X)	0.467	0.83	0.89
Departure Headway (Hd)	6.599	6.259	5.959
Convergence, Y/N	Yes	Yes	Yes
Cap	545	582	608
Service Time	4.659	4.259	4.008
HCM Lane V/C Ratio	0.468	0.82	0.885
HCM Control Delay	15.4	32.7	39.2
HCM Lane LOS	C	D	E
HCM 95th-tile Q	2.5	8.6	10.6



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	102	215	40	17	45	112
Future Volume (vph)	102	215	40	17	45	112
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			0.960		0.904	
Flt Protected		0.984			0.986	
Satd. Flow (prot)	0	1798	1754	0	1628	0
Flt Permitted		0.984			0.986	
Satd. Flow (perm)	0	1798	1754	0	1628	0
Link Speed (mph)		30	30		25	
Link Distance (ft)		546	304		789	
Travel Time (s)		12.4	6.9		21.5	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	121	256	48	20	54	133
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	377	68	0	187	0
Sign Control		Free	Free		Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	39.7%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	4.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	102	215	40	17	45	112
Future Vol, veh/h	102	215	40	17	45	112
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	121	256	48	20	54	133

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	68	0	-	0	556 58
Stage 1	-	-	-	-	58 -
Stage 2	-	-	-	-	498 -
Critical Hdwy	4.14	-	-	-	6.44 6.24
Critical Hdwy Stg 1	-	-	-	-	5.44 -
Critical Hdwy Stg 2	-	-	-	-	5.44 -
Follow-up Hdwy	2.236	-	-	-	3.536 3.336
Pot Cap-1 Maneuver	1521	-	-	-	489 1002
Stage 1	-	-	-	-	959 -
Stage 2	-	-	-	-	607 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1521	-	-	-	444 1002
Mov Cap-2 Maneuver	-	-	-	-	444 -
Stage 1	-	-	-	-	870 -
Stage 2	-	-	-	-	607 -

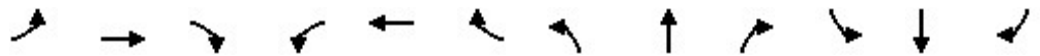
Approach	EB	WB	SB
HCM Control Delay, s	2.4	0	11.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1521	-	-	-	737
HCM Lane V/C Ratio	0.08	-	-	-	0.254
HCM Control Delay (s)	7.6	0	-	-	11.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	1

Farmington Connectivity Study  
13: Stafford Ave & Stevens St

2050 Scenario 4 (Route 177 & Build) Conditions

AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	31	291	104	89	135	22	53	124	55	45	188	35
Future Volume (vph)	31	291	104	89	135	22	53	124	55	45	188	35
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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00			0.99			1.00	
Frt		0.967			0.988			0.968			0.982	
Flt Protected		0.996			0.982			0.989			0.992	
Satd. Flow (prot)	0	1781	0	0	1807	0	0	1774	0	0	1815	0
Flt Permitted		0.962			0.643			0.767			0.869	
Satd. Flow (perm)	0	1720	0	0	1182	0	0	1376	0	0	1589	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		543			653			565			383	
Travel Time (s)		12.3			14.8			12.8			8.7	
Confl. Peds. (#/hr)			8	8					1	1		
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	36	342	122	105	159	26	62	146	65	53	221	41
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	500	0	0	290	0	0	273	0	0	315	0
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	81		20	81		20	116		20	106	
Trailing Detector (ft)	0	75		0	75		0	110		0	100	
Detector 1 Position(ft)	0	75		0	75		0	110		0	100	
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	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	19.0	19.0		19.0	19.0		19.0	19.0		19.0	19.0	
Total Split (s)	34.0	34.0		34.0	34.0		29.0	29.0		29.0	29.0	
Total Split (%)	41.5%	41.5%		41.5%	41.5%		35.4%	35.4%		35.4%	35.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	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			4.0			4.0	
Lead/Lag							Lag	Lag		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		2.0	2.0		2.0	2.0	

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	19.0
Total Split (s)	19.0
Total Split (%)	23%
Maximum Green (s)	17.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0

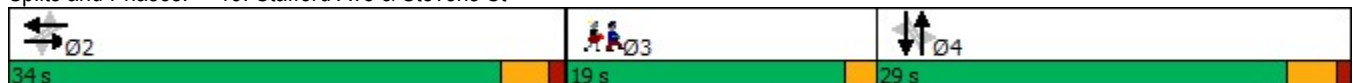


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		30.1			30.1			18.1				18.1
Actuated g/C Ratio		0.40			0.40			0.24				0.24
v/c Ratio		0.73			0.61			0.83				0.82
Control Delay		27.8			25.9			48.0				45.4
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		27.8			25.9			48.0				45.4
LOS		C			C			D				D
Approach Delay		27.8			25.9			48.0				45.4
Approach LOS		C			C			D				D
Queue Length 50th (ft)		183			100			121				139
Queue Length 95th (ft)		#322			197			189				210
Internal Link Dist (ft)		463			573			485				303
Turn Bay Length (ft)												
Base Capacity (vph)		687			472			458				529
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			0.61			0.60				0.60

Intersection Summary

Area Type: Other  
 Cycle Length: 82  
 Actuated Cycle Length: 75.2  
 Natural Cycle: 65  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.83  
 Intersection Signal Delay: 35.4      Intersection LOS: D  
 Intersection Capacity Utilization 65.1%      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.

Splits and Phases: 13: Stafford Ave & Stevens St

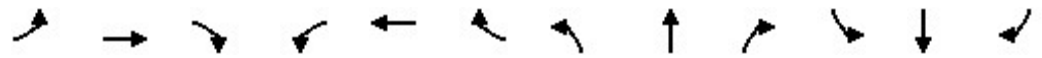


Lane Group	Ø3
Recall Mode	Ped
Walk Time (s)	7.0
Flash Dont Walk (s)	10.0
Pedestrian Calls (#/hr)	9
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Farmington Connectivity Study  
 14: S Main St (RT 177) & Mill St

2050 Scenario 4 (Route 177 & Build) Conditions

AM PEAK

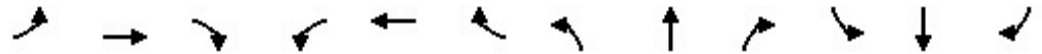


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗	↖	↗		↖	↗	
Traffic Volume (vph)	44	94	0	0	8	43	0	0	0	2	0	0
Future Volume (vph)	44	94	0	0	8	43	0	0	0	2	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		95	0		100	60		0	0		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
Frt						0.850						
Flt Protected		0.984								0.950		
Satd. Flow (prot)	0	1833	1863	0	1863	1583	1863	1863	0	1770	1863	0
Flt Permitted		0.890								0.757		
Satd. Flow (perm)	0	1658	1863	0	1863	1583	1863	1863	0	1410	1863	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			30			25			25	
Link Distance (ft)		906			356			584			461	
Travel Time (s)		24.7			8.1			15.9			12.6	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	46	98	0	0	8	45	0	0	0	2	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	144	0	0	8	45	0	0	0	2	0	0
Number of Detectors	1	1	1	1	1	1	1	0		0	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	50	50	20	40	40	50	0		0	0	
Trailing Detector (ft)	0	0	0	0	-10	-10	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	-10	-10	0	0		0	0	
Detector 1 Size(ft)	20	50	50	20	50	50	50	6		20	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	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	pm+ov		NA	Prot	D.P+P			Perm		
Protected Phases		4	2		4	4	2	1 2				1
Permitted Phases	4		4	4			1			1		
Detector Phase	4	4	2	4	4	4	2	2		1	1	
Switch Phase												
Minimum Initial (s)	6.0	6.0	5.0	6.0	6.0	6.0	5.0			25.0	25.0	
Minimum Split (s)	10.3	10.3	9.6	10.3	10.3	10.3	9.6			29.6	29.6	
Total Split (s)	46.0	46.0	10.9	46.0	46.0	46.0	10.9			29.6	29.6	
Total Split (%)	41.3%	41.3%	9.8%	41.3%	41.3%	41.3%	9.8%			26.5%	26.5%	
Maximum Green (s)	41.7	41.7	6.3	41.7	41.7	41.7	6.3			25.0	25.0	
Yellow Time (s)	3.2	3.2	3.6	3.2	3.2	3.2	3.6			3.6	3.6	
All-Red Time (s)	1.1	1.1	1.0	1.1	1.1	1.1	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)		4.3	4.6		4.3	4.3	4.6			4.6	4.6	
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag			Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	

Lane Group	Ø3
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)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	25.0
Total Split (s)	25.0
Total Split (%)	22%
Maximum Green (s)	21.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes

Farmington Connectivity Study  
 14: S Main St (RT 177) & Mill St

2050 Scenario 4 (Route 177 & Build) Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5			3.0	3.0	
Recall Mode	None	None	None	None	None	None	None			Max	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	8.3			8.3			8.3			28.7		
Actuated g/C Ratio	0.17			0.17			0.17			0.58		
v/c Ratio	0.52			0.03			0.17			0.00		
Control Delay	27.1			19.6			20.7			10.5		
Queue Delay	0.0			0.0			0.0			0.0		
Total Delay	27.1			19.6			20.7			10.5		
LOS	C			B			C			B		
Approach Delay	27.1			20.5						10.5		
Approach LOS	C			C						B		
Queue Length 50th (ft)	31			2			9			0		
Queue Length 95th (ft)	111			14			44			5		
Internal Link Dist (ft)	826			276			504			381		
Turn Bay Length (ft)							100					
Base Capacity (vph)	1444			1623			1379			813		
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	0.10			0.00			0.03			0.00		

Intersection Summary

Area Type:	Other
Cycle Length:	111.5
Actuated Cycle Length:	49.8
Natural Cycle:	75
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.52
Intersection Signal Delay:	25.1
Intersection LOS:	C
Intersection Capacity Utilization:	42.3%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 14: S Main St (RT 177) & Mill St

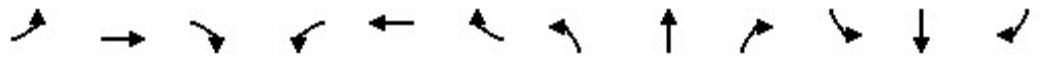


Lane Group	Ø3
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	14.0
Pedestrian Calls (#/hr)	1
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
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	

Farmington Connectivity Study  
 15: S Main St (RT 177) & Railroad Ave/New Britain Ave

2050 Scenario 4 (Route 177 & Build) Conditions

AM PEAK



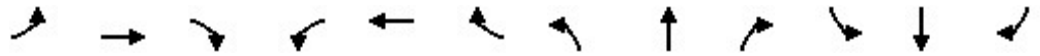
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (vph)	0	5	51	61	1	0	20	0	172	0	0	0
Future Volume (vph)	0	5	51	61	1	0	20	0	172	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		200	80		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			80			50		
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		0.877						0.850				
Flt Protected					0.953		0.950					
Satd. Flow (prot)	0	1618	0	0	1758	1845	1752	1530	0	1845	1845	0
Flt Permitted					0.687		0.757					
Satd. Flow (perm)	0	1618	0	0	1267	1845	1396	1530	0	1845	1845	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			30			25				25
Link Distance (ft)		579			590			1222				584
Travel Time (s)		15.8			13.4			33.3				15.9
Confl. Peds. (#/hr)									4	4		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	0	5	53	63	1	0	21	0	177	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	58	0	0	64	0	21	177	0	0	0	0
Number of Detectors	1	1		1	1	1	0	2		1	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40	40	0	206		50	206	
Trailing Detector (ft)	0	-10		0	-10	-10	0	100		0	100	
Detector 1 Position(ft)	0	-10		0	-10	-10	0	100		0	100	
Detector 1 Size(ft)	20	50		20	50	50	20	6		50	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)								200				200
Detector 2 Size(ft)								6				6
Detector 2 Type								Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)								0.0				0.0
Turn Type		NA		Perm	NA	pt+ov	Perm	NA		D.P+P		
Protected Phases		4			4	24		1		2	12	
Permitted Phases	4			4			1			1		
Detector Phase	4	4		4	4	4	1	1		2	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		25.0	25.0		5.0		
Minimum Split (s)	10.2	10.2		10.2	10.2		29.6	29.6		9.6		
Total Split (s)	34.0	34.0		34.0	34.0		62.0	62.0		12.4		

Lane Group	Ø3
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)	
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	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	23.0
Total Split (s)	23.0

Farmington Connectivity Study  
 15: S Main St (RT 177) & Railroad Ave/New Britain Ave

2050 Scenario 4 (Route 177 & Build) Conditions

AM PEAK

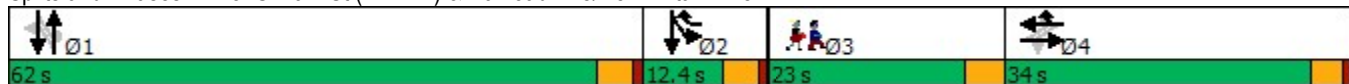


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	25.9%	25.9%		25.9%	25.9%		47.2%	47.2%		9.4%		
Maximum Green (s)	29.8	29.8		29.8	29.8		57.4	57.4		7.8		
Yellow Time (s)	3.2	3.2		3.2	3.2		3.6	3.6		3.6		
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0		
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0		
Total Lost Time (s)		4.2			4.2		4.6	4.6		4.6		
Lead/Lag	Lag	Lag		Lag	Lag		Lead	Lead		Lag		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes		
Vehicle Extension (s)	1.5	1.5		1.5	1.5		2.5	2.5		1.5		
Recall Mode	None	None		None	None		Min	Min		None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		7.0			7.0		30.3	30.3				
Actuated g/C Ratio		0.15			0.15		0.65	0.65				
v/c Ratio		0.24			0.34		0.02	0.18				
Control Delay		22.0			24.9		8.4	8.2				
Queue Delay		0.0			0.0		0.0	0.0				
Total Delay		22.0			24.9		8.4	8.2				
LOS		C			C		A	A				
Approach Delay		22.0			24.9			8.2				
Approach LOS		C			C			A				
Queue Length 50th (ft)		12			13		1	12				
Queue Length 95th (ft)		52			58		18	94				
Internal Link Dist (ft)		499			510			1142			504	
Turn Bay Length (ft)							80					
Base Capacity (vph)		1074			841		1356	1486				
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		0.05			0.08		0.02	0.12				

Intersection Summary

Area Type: Other  
 Cycle Length: 131.4  
 Actuated Cycle Length: 46.6  
 Natural Cycle: 75  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.34  
 Intersection Signal Delay: 14.0  
 Intersection Capacity Utilization 38.3%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service A

Splits and Phases: 15: S Main St (RT 177) & Railroad Ave/New Britain Ave



Lane Group	Ø3
Total Split (%)	18%
Maximum Green (s)	19.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	4
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	278	114	286	146	3
Future Volume (vph)	3	278	114	286	146	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>	0.866				0.997	
Fl <sub>t</sub> Protected	0.999			0.986		
Satd. Flow (prot)	1581	0	0	1801	1821	0
Fl <sub>t</sub> Permitted	0.999			0.986		
Satd. Flow (perm)	1581	0	0	1801	1821	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	805			584	1222	
Travel Time (s)	22.0			15.9	33.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	3	284	116	292	149	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	287	0	0	408	152	0
Sign Control	Stop			Free	Free	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.6%
	ICU Level of Service B
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	4.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	3	278	114	286	146	3
Future Vol, veh/h	3	278	114	286	146	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	3	284	116	292	149	3

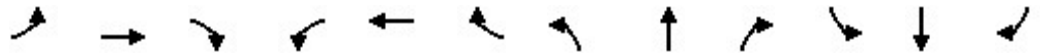
Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	675	151	152	0	0
Stage 1	151	-	-	-	-
Stage 2	524	-	-	-	-
Critical Hdwy	6.44	6.24	4.14	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.236	-	-
Pot Cap-1 Maneuver	416	890	1417	-	-
Stage 1	872	-	-	-	-
Stage 2	590	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	375	890	1417	-	-
Mov Cap-2 Maneuver	375	-	-	-	-
Stage 1	787	-	-	-	-
Stage 2	590	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.1	2.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1417	-	877	-	-
HCM Lane V/C Ratio	0.082	-	0.327	-	-
HCM Control Delay (s)	7.8	0	11.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.3	-	1.4	-	-

Farmington Connectivity Study  
 17: Plainville Ave (RT 177) & Coopermine Rd

2050 Scenario 4 (Route 177 & Build) Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	95	99	72	93	27	16	26	384	77	40	561	42
Future Volume (vph)	95	99	72	93	27	16	26	384	77	40	561	42
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	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.963			0.984			0.979			0.991	
Fl <sub>t</sub> Protected		0.982			0.967			0.997			0.997	
Satd. Flow (prot)	0	1779	0	0	1790	0	0	1836	0	0	1859	0
Fl <sub>t</sub> Permitted		0.834			0.555			0.941			0.942	
Satd. Flow (perm)	0	1511	0	0	1027	0	0	1733	0	0	1756	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			7			14			5	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		498			472			529			491	
Travel Time (s)		9.7			9.2			10.3			9.6	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	108	113	82	106	31	18	30	436	88	45	638	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	303	0	0	155	0	0	554	0	0	731	0
Number of Detectors	1	3		1	3		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	24		20	24		20	361		20	361	
Trailing Detector (ft)	0	-10		0	-10		0	185		0	185	
Detector 1 Position(ft)	0	-10		0	-10		0	185		0	185	
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)		6			6			355			355	
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	
Detector 3 Position(ft)		18			18							
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	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	20.5	20.5		20.5	20.5		21.9	21.9		21.9	21.9	
Total Split (s)	40.5	40.5		40.5	40.5		66.9	66.9		66.9	66.9	

Farmington Connectivity Study  
 17: Plainville Ave (RT 177) & Coopermine Rd

2050 Scenario 4 (Route 177 & Build) Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	37.7%	37.7%		37.7%	37.7%		62.3%	62.3%		62.3%	62.3%	
Maximum Green (s)	35.0	35.0		35.0	35.0		60.0	60.0		60.0	60.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		4.4	4.4		4.4	4.4	
All-Red Time (s)	2.2	2.2		2.2	2.2		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.5			5.5			6.9			6.9	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5		1.5	1.5		5.0	5.0		5.0	5.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	14.0	14.0		14.0	14.0							
Flash Dont Walk (s)	1.0	1.0		1.0	1.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		21.1			21.1			50.1			50.1	
Actuated g/C Ratio		0.25			0.25			0.59			0.59	
v/c Ratio		0.78			0.59			0.54			0.70	
Control Delay		43.9			39.0			13.0			17.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		43.9			39.0			13.0			17.2	
LOS		D			D			B			B	
Approach Delay		43.9			39.0			13.0			17.2	
Approach LOS		D			D			B			B	
Queue Length 50th (ft)		163			80			156			245	
Queue Length 95th (ft)		251			141			305			473	
Internal Link Dist (ft)		418			392			449			411	
Turn Bay Length (ft)												
Base Capacity (vph)		682			461			1262			1276	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.44			0.34			0.44			0.57	

Intersection Summary

Area Type: Other  
 Cycle Length: 107.4  
 Actuated Cycle Length: 84.5  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.78  
 Intersection Signal Delay: 22.5  
 Intersection Capacity Utilization 70.7%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service C

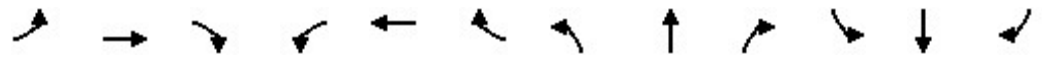
Splits and Phases: 17: Plainville Ave (RT 177) & Coopermine Rd



Farmington Connectivity Study  
 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd

2050 Scenario 4 (Route 177 & Build) Conditions

AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (vph)	22	205	283	33	59	28	124	440	59	82	797	14
Future Volume (vph)	22	205	283	33	59	28	124	440	59	82	797	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	250		0	80		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			100			40		
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			0.968			0.982			0.997	
Flt Protected		0.998			0.986		0.950			0.950		
Satd. Flow (prot)	0	1720	0	0	1778	0	1770	1829	0	1770	1857	0
Flt Permitted		0.985			0.607		0.079			0.401		
Satd. Flow (perm)	0	1697	0	0	1095	0	147	1829	0	747	1857	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					12			9				1
Link Speed (mph)		30			30			45				45
Link Distance (ft)		594			761			713				527
Travel Time (s)		13.5			17.3			10.8				8.0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	22	209	289	34	60	29	127	449	60	84	813	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	520	0	0	123	0	127	509	0	84	827	0
Number of Detectors	1	3		1	2		3	1		3	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	18		20	12		24	356		24	206	
Trailing Detector (ft)	0	-10		0	-6		-6	350		-6	200	
Detector 1 Position(ft)	0	-10		0	-6		-6	350		-6	200	
Detector 1 Size(ft)	20	6		20	6		6	6		6	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)		0			6			6			6	
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	
Detector 3 Position(ft)		12						18			18	
Detector 3 Size(ft)		6						6			6	
Detector 3 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		3.0	30.0		3.0	30.0	

Farmington Connectivity Study  
 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd

2050 Scenario 4 (Route 177 & Build) Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	30.9	30.9		30.9	30.9		7.0	37.1		7.0	37.1	
Total Split (s)	34.9	34.9		34.9	34.9		19.0	67.1		12.0	67.1	
Total Split (%)	28.8%	28.8%		28.8%	28.8%		15.7%	55.5%		9.9%	55.5%	
Maximum Green (s)	30.0	30.0		30.0	30.0		15.0	60.0		8.0	60.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.0	4.4		3.0	4.4	
All-Red Time (s)	1.6	1.6		1.6	1.6		1.0	2.7		1.0	2.7	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.9			4.9		4.0	7.1		4.0	7.1	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)	25.0	25.0		25.0	25.0							
Flash Dont Walk (s)	1.0	1.0		1.0	1.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		30.4			30.4		69.5	58.5		62.3	52.7	
Actuated g/C Ratio		0.28			0.28		0.64	0.54		0.57	0.48	
v/c Ratio		1.10			0.39		0.52	0.52		0.17	0.92	
Control Delay		112.1			36.3		20.2	18.5		8.2	43.5	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		112.1			36.3		20.2	18.5		8.2	43.5	
LOS		F			D		C	B		A	D	
Approach Delay		112.1			36.3			18.9			40.2	
Approach LOS		F			D			B			D	
Queue Length 50th (ft)		~455			67		31	223		20	517	
Queue Length 95th (ft)		#717			136		83	324		37	#836	
Internal Link Dist (ft)		514			681			633			447	
Turn Bay Length (ft)							250			80		
Base Capacity (vph)		471			312		319	1137		512	1032	
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		1.10			0.39		0.40	0.45		0.16	0.80	

Intersection Summary

Area Type: Other  
 Cycle Length: 121  
 Actuated Cycle Length: 109.3  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.10  
 Intersection Signal Delay: 50.9  
 Intersection LOS: D  
 Intersection Capacity Utilization 93.3%  
 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.

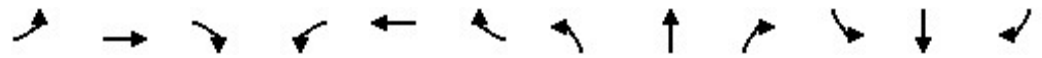
Splits and Phases: 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd



Farmington Connectivity Study  
 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)

2050 Scenario 4 (Route 177 & Build) Conditions

AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	97	726	172	107	289	73	93	481	132	257	857	71
Future Volume (vph)	97	726	172	107	289	73	93	481	132	257	857	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260		260	180		0	250		250	165		165
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (ft)	190			170			150			115		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor				1.00			1.00			1.00	1.00	
Frt			0.850		0.970				0.850		0.989	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	3433	0	1770	1863	1583	1770	3496	0
Flt Permitted	0.950			0.950			0.113			0.102		
Satd. Flow (perm)	1770	1863	1583	1767	3433	0	210	1863	1583	190	3496	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			106		20				104		5	
Link Speed (mph)		45			45			40			45	
Link Distance (ft)		780			1567			643			474	
Travel Time (s)		11.8			23.7			11.0			7.2	
Confl. Peds. (#/hr)			1	1			3		1	1		3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	104	781	185	115	311	78	100	517	142	276	922	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	104	781	185	115	389	0	100	517	142	276	998	0
Number of Detectors	3	2	2	3	2		3	3	3	3	3	
Detector Template												
Leading Detector (ft)	24	306	306	24	306		24	24	24	24	24	
Trailing Detector (ft)	-6	150	150	-6	150		-6	-6	-6	-6	-6	
Detector 1 Position(ft)	-6	150	150	-6	150		-6	-6	-6	-6	-6	
Detector 1 Size(ft)	6	6	6	6	6		6	6	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	6	300	300	6	300		6	6	6	6	6	
Detector 2 Size(ft)	6	6	6	6	6		6	6	6	6	6	
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 3 Position(ft)	18			18			18	18	18	18	18	
Detector 3 Size(ft)	6			6			6	6	6	6	6	
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0	0.0	0.0	0.0	
Turn Type	Prot	NA	Prot	Prot	NA		pm+pt	NA	pt+ov	pm+pt	NA	
Protected Phases	1	6	6	5	2		3	8	5 8	7	4	
Permitted Phases							8			4		
Detector Phase	1	6	6	5	2		3	8	8	7	4	

Lane Group	Ø9
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	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	

Farmington Connectivity Study  
 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)

2050 Scenario 4 (Route 177 & Build) Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
<b>Switch Phase</b>												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0		5.0	9.0		5.0	9.0	
Minimum Split (s)	9.0	20.2	20.2	9.0	20.2		9.0	14.7		9.0	14.7	
Total Split (s)	14.0	45.2	45.2	14.0	35.2		19.0	40.7		19.0	40.7	
Total Split (%)	9.3%	30.0%	30.0%	9.3%	23.3%		12.6%	27.0%		12.6%	27.0%	
Maximum Green (s)	10.0	40.0	40.0	10.0	30.0		15.0	35.0		15.0	35.0	
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2		3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.2		1.0	1.2	
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)	4.0	5.2	5.2	4.0	5.2		4.0	5.7		4.0	5.7	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	2.5	2.5	1.5	2.5		2.0	3.0		2.0	2.0	
Recall Mode	None	Min	Min	None	Min		None	None		None	None	
<b>Walk Time (s)</b>												
<b>Flash Dont Walk (s)</b>												
<b>Pedestrian Calls (#/hr)</b>												
Act Effct Green (s)	9.9	40.4	40.4	10.1	40.6		45.9	35.3	50.5	55.7	41.6	
Actuated g/C Ratio	0.08	0.32	0.32	0.08	0.32		0.37	0.28	0.40	0.44	0.33	
v/c Ratio	0.75	1.30	0.32	0.81	0.35		0.53	0.98	0.20	1.00	0.86	
Control Delay	88.4	183.7	16.9	95.3	33.1		34.1	80.8	7.4	89.4	48.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	88.4	183.7	16.9	95.3	33.1		34.1	80.8	7.4	89.4	48.1	
LOS	F	F	B	F	C		C	F	A	F	D	
Approach Delay		145.6			47.3			60.9			57.0	
Approach LOS		F			D			E			E	
Queue Length 50th (ft)	79	~747	42	88	110		42	387	17	159	361	
Queue Length 95th (ft)	#221	#1343	134	#250	210		110	#845	51	#478	#765	
Internal Link Dist (ft)		700			1487			563			394	
Turn Bay Length (ft)	260		260	180			250		250	165		
Base Capacity (vph)	142	599	581	142	1125		276	525	699	275	1163	
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	0.73	1.30	0.32	0.81	0.35		0.36	0.98	0.20	1.00	0.86	










**Intersection Summary**

Area Type:	Other
Cycle Length:	150.9
Actuated Cycle Length:	125.3
Natural Cycle:	145
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.30
Intersection Signal Delay:	82.7
Intersection LOS:	F
Intersection Capacity Utilization:	99.4%
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.	

Lane Group	Ø9
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	32.0
Total Split (s)	32.0
Total Split (%)	21%
Maximum Green (s)	28.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
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)	21.0
Pedestrian Calls (#/hr)	7
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

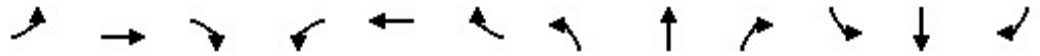
Queue shown is maximum after two cycles.

Splits and Phases: 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)

 Ø1	 Ø2	 Ø3	 Ø4	 Ø9
14 s	35.2 s	19 s	40.7 s	32 s
 Ø5	 Ø6	 Ø7	 Ø8	
14 s	45.2 s	19 s	40.7 s	

Farmington Connectivity Study  
 20: Unionville Ave (RT 177) & Northwest Dr

2050 Scenario 4 (Route 177 & Build) Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	188	88	42	153	47	226	521	172	114	823	62
Future Volume (vph)	31	188	88	42	153	47	226	521	172	114	823	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	210		0	260		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
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		0.952			0.965			0.963			0.989	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	1739	0	1736	1763	0	1736	3343	0	1736	3433	0
Flt Permitted	0.543			0.361			0.148			0.274		
Satd. Flow (perm)	992	1739	0	660	1763	0	270	3343	0	501	3433	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			11			34			6	
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		710			592			572			675	
Travel Time (s)		13.8			11.5			9.8			11.5	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	35	211	99	47	172	53	254	585	193	128	925	70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	310	0	47	225	0	254	778	0	128	995	0
Number of Detectors	3	3		3	3		3	2		3	2	
Detector Template												
Leading Detector (ft)	24	24		24	24		24	331		24	331	
Trailing Detector (ft)	-6	-6		-6	-6		-6	150		-6	150	
Detector 1 Position(ft)	-6	-6		-6	-6		-6	150		-6	150	
Detector 1 Size(ft)	6	6		6	6		6	6		6	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)	6	6		6	6		6	325		6	325	
Detector 2 Size(ft)	6	6		6	6		6	6		6	6	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 3 Position(ft)	18	18		18	18		18			18		
Detector 3 Size(ft)	6	6		6	6		6			6		
Detector 3 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex		
Detector 3 Channel												
Detector 3 Extend (s)	0.0	0.0		0.0	0.0		0.0			0.0		
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	
Switch Phase												

Lane Group	Ø9
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)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	9.0		4.0	9.0		4.0	15.0		4.0	15.0	
Minimum Split (s)	8.0	15.2		8.0	15.2		8.0	22.5		8.0	22.5	
Total Split (s)	14.0	23.2		12.0	21.2		12.0	27.5		18.0	33.5	
Total Split (%)	12.1%	20.1%		10.4%	18.3%		10.4%	23.8%		15.6%	29.0%	
Maximum Green (s)	10.0	17.0		8.0	15.0		8.0	20.0		14.0	26.0	
Yellow Time (s)	3.0	4.1		3.0	4.1		3.0	4.8		3.0	4.8	
All-Red Time (s)	1.0	2.1		1.0	2.1		1.0	2.7		1.0	2.7	
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	6.2		4.0	6.2		4.0	7.5		4.0	7.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	3.0		1.5	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	22.8	17.1		23.3	17.3		38.7	27.1		36.7	26.1	
Actuated g/C Ratio	0.30	0.23		0.31	0.23		0.52	0.36		0.49	0.35	
v/c Ratio	0.10	0.76		0.16	0.54		0.86	0.63		0.36	0.83	
Control Delay	16.8	40.8		17.6	30.9		44.3	23.0		12.2	30.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	16.8	40.8		17.6	30.9		44.3	23.0		12.2	30.9	
LOS	B	D		B	C		D	C		B	C	
Approach Delay		38.4			28.6			28.3			28.8	
Approach LOS		D			C			C			C	
Queue Length 50th (ft)	11	137		15	94		66	161		30	237	
Queue Length 95th (ft)	28	#267		35	164		#214	236		59	#353	
Internal Link Dist (ft)		630			512			492			595	
Turn Bay Length (ft)							210			260		
Base Capacity (vph)	429	409		326	414		296	1230		509	1198	
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	0.08	0.76		0.14	0.54		0.86	0.63		0.25	0.83	

**Intersection Summary**

Area Type: Other  
 Cycle Length: 115.7  
 Actuated Cycle Length: 75.1  
 Natural Cycle: 140  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 29.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 73.9%  
 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: 20: Unionville Ave (RT 177) & Northwest Dr

↙ Ø1	↓ Ø2	↙ Ø3	→ Ø4	🚶 Ø9
12 s	33.5 s	12 s	23.2 s	35 s
↘ Ø5	↑ Ø6	↘ Ø7	← Ø8	
18 s	27.5 s	14 s	21.2 s	

Lane Group	Ø9
Minimum Initial (s)	1.0
Minimum Split (s)	35.0
Total Split (s)	35.0
Total Split (%)	30%
Maximum Green (s)	31.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
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)	24.0
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	
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	
<b>Intersection Summary</b>	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	24	236	87	6	48	92	20	124	6	149	155	12
Future Volume (vph)	24	236	87	6	48	92	20	124	6	149	155	12
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	1.00	1.00	1.00	1.00	1.00
Frt		0.966			0.915			0.994			0.995	
Flt Protected		0.997			0.998			0.993			0.977	
Satd. Flow (prot)	0	1777	0	0	1684	0	0	1821	0	0	1793	0
Flt Permitted		0.997			0.998			0.993			0.977	
Satd. Flow (perm)	0	1777	0	0	1684	0	0	1821	0	0	1793	0
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		506			528			2775			437	
Travel Time (s)		9.9			10.3			63.1			9.9	
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 (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	26	257	95	7	52	100	22	135	7	162	168	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	378	0	0	159	0	0	164	0	0	343	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

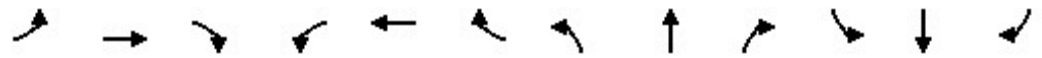
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	62.4%
ICU Level of Service	B
Analysis Period (min)	15

Intersection	
Intersection Delay, s/veh	14.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	24	236	87	6	48	92	20	124	6	149	155	12
Future Vol, veh/h	24	236	87	6	48	92	20	124	6	149	155	12
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, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	26	257	95	7	52	100	22	135	7	162	168	13
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	16.5	10.9	11.7	16.3
HCM LOS	C	B	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	7%	4%	47%
Vol Thru, %	83%	68%	33%	49%
Vol Right, %	4%	25%	63%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	150	347	146	316
LT Vol	20	24	6	149
Through Vol	124	236	48	155
RT Vol	6	87	92	12
Lane Flow Rate	163	377	159	343
Geometry Grp	1	1	1	1
Degree of Util (X)	0.279	0.588	0.256	0.56
Departure Headway (Hd)	6.16	5.616	5.805	5.871
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	577	637	613	611
Service Time	4.259	3.695	3.904	3.95
HCM Lane V/C Ratio	0.282	0.592	0.259	0.561
HCM Control Delay	11.7	16.5	10.9	16.3
HCM Lane LOS	B	C	B	C
HCM 95th-tile Q	1.1	3.8	1	3.5



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	110	148	120	11	74	0	51	136	4	0	167	83
Future Volume (vph)	110	148	120	11	74	0	51	136	4	0	167	83
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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.957						0.997			0.955	
Flt Protected		0.986			0.993			0.987				
Satd. Flow (prot)	0	1707	0	0	1797	0	0	1781	0	0	1728	0
Flt Permitted		0.986			0.993			0.987				
Satd. Flow (perm)	0	1707	0	0	1797	0	0	1781	0	0	1728	0
Link Speed (mph)		30			35			30			30	
Link Distance (ft)		414			396			469			2775	
Travel Time (s)		9.4			7.7			10.7			63.1	
Confl. Peds. (#/hr)							2		1	1		2
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	136	183	148	14	91	0	63	168	5	0	206	102
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	467	0	0	105	0	0	236	0	0	308	0
Sign Control		Stop			Stop			Stop			Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	62.1%
ICU Level of Service	B
Analysis Period (min)	15

Intersection	
Intersection Delay, s/veh	18.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	110	148	120	11	74	0	51	136	4	0	167	83
Future Vol, veh/h	110	148	120	11	74	0	51	136	4	0	167	83
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	136	183	148	14	91	0	63	168	5	0	206	102
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

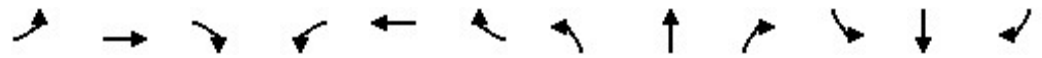
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	24.7	11.5	14.2	15.6
HCM LOS	C	B	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	27%	29%	13%	0%
Vol Thru, %	71%	39%	87%	67%
Vol Right, %	2%	32%	0%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	191	378	85	250
LT Vol	51	110	11	0
Through Vol	136	148	74	167
RT Vol	4	120	0	83
Lane Flow Rate	236	467	105	309
Geometry Grp	1	1	1	1
Degree of Util (X)	0.423	0.757	0.197	0.522
Departure Headway (Hd)	6.464	5.839	6.752	6.086
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	556	625	530	590
Service Time	4.522	3.839	4.816	4.139
HCM Lane V/C Ratio	0.424	0.747	0.198	0.524
HCM Control Delay	14.2	24.7	11.5	15.6
HCM Lane LOS	B	C	B	C
HCM 95th-tile Q	2.1	6.8	0.7	3

Farmington Connectivity Study  
 23: New Britain Ave & Scott Swamp Rd (US 6)

2050 Scenario 4 (Route 177 & Build) Conditions

AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	828	38	10	546	118	34	63	11	127	85	50
Future Volume (vph)	47	828	38	10	546	118	34	63	11	127	85	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	340		0	100		320	190		0	120		0
Storage Lanes	1		0	1		1	1		0	2		0
Taper Length (ft)	150			100			100			110		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.993				0.850		0.978			0.944	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3514	0	1770	3539	1583	1770	1822	0	3433	1758	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3514	0	1770	3539	1583	1770	1822	0	3433	1758	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				139		9				32
Link Speed (mph)		45			45			25				35
Link Distance (ft)		3978			920			676				631
Travel Time (s)		60.3			13.9			18.4				12.3
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	55	974	45	12	642	139	40	74	13	149	100	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	55	1019	0	12	642	139	40	87	0	149	159	0
Number of Detectors	3	0		3	0	0	3	3		3	3	
Detector Template												
Leading Detector (ft)	24	0		24	0	0	24	24		24	24	
Trailing Detector (ft)	-10	0		-10	0	0	-6	-6		-6	-6	
Detector 1 Position(ft)	-10	0		-10	0	0	-6	-6		-6	-6	
Detector 1 Size(ft)	6	6		6	6	20	6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
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)	6			6			6	6		6	6	
Detector 2 Size(ft)	6			6			6	6		6	6	
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0		0.0	0.0	
Detector 3 Position(ft)	18			18			18	18		18	18	
Detector 3 Size(ft)	6			6			6	6		6	6	
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0		0.0	0.0	
Turn Type	Prot	NA		Prot	NA	pt+ov	Split	NA		Split	NA	
Protected Phases	1	6		5	2	2 7	8	8		7	7	
Permitted Phases												
Detector Phase	1	6		5	2	2	8	8		7	7	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0		7.0	7.0	

Farmington Connectivity Study  
 23: New Britain Ave & Scott Swamp Rd (US 6)

2050 Scenario 4 (Route 177 & Build) Conditions

AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.9	20.8		11.4	20.8		34.0	34.0		13.2	13.2	
Total Split (s)	10.0	35.0		12.0	37.0		14.0	14.0		19.0	19.0	
Total Split (%)	12.5%	43.8%		15.0%	46.3%		17.5%	17.5%		23.8%	23.8%	
Maximum Green (s)	5.1	29.2		5.6	31.2		8.0	8.0		12.8	12.8	
Yellow Time (s)	3.0	4.8		3.0	4.8		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.9	1.0		3.4	1.0		2.7	2.7		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.9	5.8		6.4	5.8		6.0	6.0		6.2	6.2	
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)							27.0	27.0				
Flash Dont Walk (s)							1.0	1.0				
Pedestrian Calls (#/hr)							0	0				
Act Effct Green (s)	5.6	44.5		5.3	40.5	58.0	7.2	7.2		10.1	10.1	
Actuated g/C Ratio	0.07	0.56		0.07	0.51	0.72	0.09	0.09		0.13	0.13	
v/c Ratio	0.44	0.52		0.10	0.36	0.12	0.25	0.51		0.34	0.63	
Control Delay	48.1	14.8		34.1	15.8	4.3	37.5	41.6		33.4	37.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	48.1	14.8		34.1	15.8	4.3	37.5	41.6		33.4	37.7	
LOS	D	B		C	B	A	D	D		C	D	
Approach Delay		16.5			14.1			40.3			35.6	
Approach LOS		B			B			D			D	
Queue Length 50th (ft)	26	157		6	92	0	19	37		35	61	
Queue Length 95th (ft)	#61	283		22	191	57	46	77		56	108	
Internal Link Dist (ft)		3898			840			596			551	
Turn Bay Length (ft)	340			100		320	190			120		
Base Capacity (vph)	124	1956		123	1791	1186	179	192		549	308	
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	0.44	0.52		0.10	0.36	0.12	0.22	0.45		0.27	0.52	

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 43 (54%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.63  
 Intersection Signal Delay: 19.5  
 Intersection LOS: B  
 Intersection Capacity Utilization 60.3%  
 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.

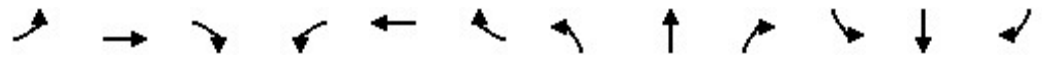
Splits and Phases: 23: New Britain Ave & Scott Swamp Rd (US 6)



Farmington Connectivity Study  
 24: Hyde Rd & Scott Swamp Rd (US 6)

2050 Scenario 4 (Route 177 & Build) Conditions






AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	1092	7	148	599	19	3	6	50	2	1	1
Future Volume (vph)	9	1092	7	148	599	19	3	6	50	2	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		0	360		0	0		0	0		0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	100			65			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.995				0.850			0.850
Flt Protected	0.950			0.950				0.982			0.968	
Satd. Flow (prot)	1787	3571	0	1787	3556	0	0	1847	1599	0	1821	1599
Flt Permitted	0.950			0.950				0.974				
Satd. Flow (perm)	1787	3571	0	1787	3556	0	0	1832	1599	0	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			6				48			113
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1090			523			762			370	
Travel Time (s)		16.5			7.9			20.8			10.1	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	11	1285	8	174	705	22	4	7	59	2	1	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	1293	0	174	727	0	0	11	59	0	3	1
Number of Detectors	3	0		3	0		1	3	3	1	3	3
Detector Template							Left			Left		
Leading Detector (ft)	24	0		24	0		20	24	24	20	24	24
Trailing Detector (ft)	-10	0		-10	0		0	-10	-10	0	-10	-10
Detector 1 Position(ft)	-10	0		-10	0		0	-10	-10	0	-10	-10
Detector 1 Size(ft)	6	6		6	6		20	6	6	20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	6			6			6	6	6		6	6
Detector 2 Size(ft)	6			6			6	6	6		6	6
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0	0.0		0.0	0.0
Detector 3 Position(ft)	18			18			18	18	18		18	18
Detector 3 Size(ft)	6			6			6	6	6		6	6
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	NA		Prot	NA		Perm	NA	pm+ov	Perm	NA	Perm
Protected Phases	1	6		5	2			4	5		4	
Permitted Phases							4		4	4		4
Detector Phase	1	6		5	2		4	4	5	4	4	4
Switch Phase												



Splits and Phases: 24: Hyde Rd & Scott Swamp Rd (US 6)

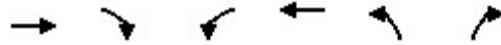
 Ø1	 Ø2 (R)	 Ø4
15 s	50 s	15 s
 Ø5	 Ø6 (R)	
15 s	50 s	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	
Traffic Volume (vph)	934	184	105	709	183	16
Future Volume (vph)	934	184	105	709	183	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		350	350		380	0
Storage Lanes		1	1		1	0
Taper Length (ft)			100		130	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	0.95
Frt		0.850			0.988	
Flt Protected			0.950		0.956	
Satd. Flow (prot)	3539	1583	1770	3539	3413	0
Flt Permitted			0.950		0.956	
Satd. Flow (perm)	3539	1583	1770	3539	3413	0
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			45	30	
Link Distance (ft)	1087			600	782	
Travel Time (s)	16.5			9.1	17.8	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	1099	216	124	834	215	19
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1099	216	124	834	234	0
Number of Detectors	0	0	3	0	1	
Detector Template						
Leading Detector (ft)	0	0	24	0	56	
Trailing Detector (ft)	0	0	-10	0	50	
Detector 1 Position(ft)	0	0	-10	0	50	
Detector 1 Size(ft)	6	20	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)			6			
Detector 2 Size(ft)			6			
Detector 2 Type			Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)			0.0			
Detector 3 Position(ft)			18			
Detector 3 Size(ft)			6			
Detector 3 Type			Cl+Ex			
Detector 3 Channel						
Detector 3 Extend (s)			0.0			
Turn Type	NA	pm+ov	Prot	NA	Prot	
Protected Phases	2	3	1	12	3	
Permitted Phases		2				
Detector Phase	2	3	1	2	3	
Switch Phase						
Minimum Initial (s)	15.0	7.0	5.0		7.0	

Farmington Connectivity Study  
 25: Scott Swamp Rd (RT 552) & Scott Swamp Rd (US 6)/Colt Hwy (US 6)

2050 Scenario 4 (Route 177 & Build) Conditions  
 AM PEAK

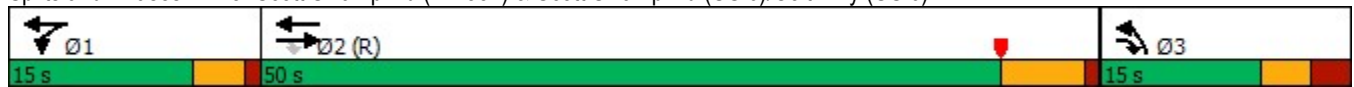


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	21.0	29.5	9.0		29.5	
Total Split (s)	50.0	15.0	15.0		15.0	
Total Split (%)	62.5%	18.8%	18.8%		18.8%	
Maximum Green (s)	44.0	9.5	11.0		9.5	
Yellow Time (s)	5.0	3.0	3.0		3.0	
All-Red Time (s)	1.0	2.5	1.0		2.5	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.0	5.5	4.0		5.5	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	2.0		3.0	
Recall Mode	C-Max	None	Min		None	
Walk Time (s)		23.0			23.0	
Flash Dont Walk (s)		1.0			1.0	
Pedestrian Calls (#/hr)		0			0	
Act Effct Green (s)	46.5	61.3	9.2	61.7	8.8	
Actuated g/C Ratio	0.58	0.77	0.12	0.77	0.11	
v/c Ratio	0.53	0.18	0.61	0.31	0.63	
Control Delay	8.0	3.8	46.3	3.1	41.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	8.0	3.8	46.3	3.1	41.7	
LOS	A	A	D	A	D	
Approach Delay	7.3			8.7	41.7	
Approach LOS	A			A	D	
Queue Length 50th (ft)	221	67	59	52	58	
Queue Length 95th (ft)	54	17	104	64	88	
Internal Link Dist (ft)	1007			520	702	
Turn Bay Length (ft)		350	350		380	
Base Capacity (vph)	2057	1226	243	2730	405	
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	0.53	0.18	0.51	0.31	0.58	

Intersection Summary

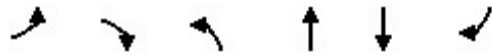
Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 34 (43%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.63  
 Intersection Signal Delay: 11.1  
 Intersection Capacity Utilization 50.4%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service A

Splits and Phases: 25: Scott Swamp Rd (RT 552) & Scott Swamp Rd (US 6)/Colt Hwy (US 6)





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3
Lane Configurations							
Traffic Volume (vph)	334	121	87	385	275	90	
Future Volume (vph)	334	121	87	385	275	90	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor				1.00	0.99		
Frt	0.964				0.967		
Flt Protected	0.965			0.991			
Satd. Flow (prot)	1716	0	0	1828	1773	0	
Flt Permitted	0.965			0.550			
Satd. Flow (perm)	1716	0	0	1014	1773	0	
Right Turn on Red		No				Yes	
Satd. Flow (RTOR)					15		
Link Speed (mph)	30			30	30		
Link Distance (ft)	345			413	499		
Travel Time (s)	7.8			9.4	11.3		
Confl. Peds. (#/hr)			3			3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	
Adj. Flow (vph)	371	134	97	428	306	100	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	505	0	0	525	406	0	
Number of Detectors	2		1	1	1		
Detector Template			Left				
Leading Detector (ft)	18		20	206	206		
Trailing Detector (ft)	0		0	200	200		
Detector 1 Position(ft)	0		0	200	200		
Detector 1 Size(ft)	6		20	6	6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		
Detector 2 Position(ft)	12						
Detector 2 Size(ft)	6						
Detector 2 Type	Cl+Ex						
Detector 2 Channel							
Detector 2 Extend (s)	0.0						
Turn Type	Prot		D.P+P	NA	NA		
Protected Phases	4		1	12	2	3	
Permitted Phases			2				
Detector Phase	4		1	1	2		
Switch Phase							
Minimum Initial (s)	5.0		3.0		15.0	1.0	
Minimum Split (s)	9.0		7.0		22.2	25.0	
Total Split (s)	34.0		12.0		39.2	25.0	
Total Split (%)	30.9%		10.9%		35.6%	23%	
Maximum Green (s)	30.0		8.0		32.0	21.0	
Yellow Time (s)	3.0		3.0		4.1	4.0	

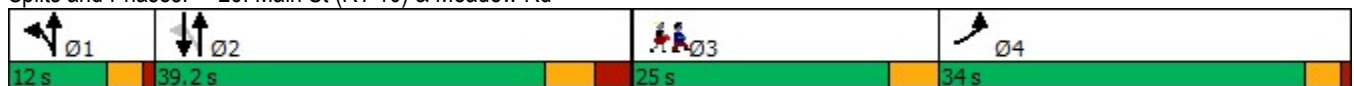


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3
All-Red Time (s)	1.0		1.0		3.1		0.0
Lost Time Adjust (s)	0.0				0.0		
Total Lost Time (s)	4.0				7.2		
Lead/Lag	Lag		Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	3.0		3.0		5.0		3.0
Recall Mode	None		Max		Min		None
Walk Time (s)							7.0
Flash Dont Walk (s)							14.0
Pedestrian Calls (#/hr)							3
Act Effct Green (s)	31.0			32.4	20.8		
Actuated g/C Ratio	0.39			0.41	0.26		
v/c Ratio	0.75			1.05	0.85		
Control Delay	32.8			78.2	45.6		
Queue Delay	0.0			0.0	0.0		
Total Delay	32.8			78.2	45.6		
LOS	C			E	D		
Approach Delay	32.8			78.2	45.6		
Approach LOS	C			E	D		
Queue Length 50th (ft)	182			~169	166		
Queue Length 95th (ft)	#606			#646	#395		
Internal Link Dist (ft)	265			333	419		
Turn Bay Length (ft)							
Base Capacity (vph)	670			498	747		
Starvation Cap Reductn	0			0	0		
Spillback Cap Reductn	0			0	0		
Storage Cap Reductn	0			0	0		
Reduced v/c Ratio	0.75			1.05	0.54		

Intersection Summary

Area Type: Other  
 Cycle Length: 110.2  
 Actuated Cycle Length: 79.3  
 Natural Cycle: 150  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 1.05  
 Intersection Signal Delay: 53.0  
 Intersection LOS: D  
 Intersection Capacity Utilization 83.7%  
 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.

Splits and Phases: 26: Main St (RT 10) & Meadow Rd





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	31	55	21	214	306	14
Future Volume (vph)	31	55	21	214	306	14
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	0.914				0.994	
Flt Protected	0.982			0.996		
Satd. Flow (prot)	1672	0	0	1855	1852	0
Flt Permitted	0.982			0.996		
Satd. Flow (perm)	1672	0	0	1855	1852	0
Link Speed (mph)	25			30	30	
Link Distance (ft)	221			237	672	
Travel Time (s)	6.0			5.4	15.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	34	60	23	233	333	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	94	0	0	256	348	0
Sign Control	Stop			Free	Free	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	40.5%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	31	55	21	214	306	14
Future Vol, veh/h	31	55	21	214	306	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	60	23	233	333	15

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	620	341	348	0	-	0
Stage 1	341	-	-	-	-	-
Stage 2	279	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	452	701	1211	-	-	-
Stage 1	720	-	-	-	-	-
Stage 2	768	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	442	701	1211	-	-	-
Mov Cap-2 Maneuver	442	-	-	-	-	-
Stage 1	704	-	-	-	-	-
Stage 2	768	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.4	0.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1211	-	579	-	-
HCM Lane V/C Ratio	0.019	-	0.161	-	-
HCM Control Delay (s)	8	0	12.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	20	49	17	242	298	13
Future Volume (vph)	20	49	17	242	298	13
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	0.905			0.994		
Flt Protected	0.986			0.997		
Satd. Flow (prot)	1662	0	0	1857	1852	0
Flt Permitted	0.986			0.997		
Satd. Flow (perm)	1662	0	0	1857	1852	0
Link Speed (mph)	25			30	30	
Link Distance (ft)	482			255	250	
Travel Time (s)	13.1			5.8	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	53	18	263	324	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	75	0	0	281	338	0
Sign Control	Stop			Free	Free	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	37.5%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	49	17	242	298	13
Future Vol, veh/h	20	49	17	242	298	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	53	18	263	324	14

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	630	331	338	0	-	0
Stage 1	331	-	-	-	-	-
Stage 2	299	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	446	711	1221	-	-	-
Stage 1	728	-	-	-	-	-
Stage 2	752	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	438	711	1221	-	-	-
Mov Cap-2 Maneuver	438	-	-	-	-	-
Stage 1	716	-	-	-	-	-
Stage 2	752	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.8	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1221	-	602	-	-
HCM Lane V/C Ratio	0.015	-	0.125	-	-
HCM Control Delay (s)	8	0	11.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Farmington Connectivity Study  
 29: Whispering Rod Rd/Chaffee Ln & W District Rd

2050 Scenario 4 (Route 177 & Build) Conditions  
 AM PEAK



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	30	101	0	13	81	26	2	0	19	25	1	21
Future Volume (vph)	30	101	0	13	81	26	2	0	19	25	1	21
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	1.00	1.00	1.00	1.00	1.00
Frt					0.971			0.877			0.939	
Flt Protected		0.989			0.995			0.996			0.974	
Satd. Flow (prot)	0	1842	0	0	1800	0	0	1627	0	0	1704	0
Flt Permitted		0.989			0.995			0.996			0.974	
Satd. Flow (perm)	0	1842	0	0	1800	0	0	1627	0	0	1704	0
Link Speed (mph)		25			25			25			20	
Link Distance (ft)		361			319			306			370	
Travel Time (s)		9.8			8.7			8.3			12.6	
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)	33	110	0	14	88	28	2	0	21	27	1	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	143	0	0	130	0	0	23	0	0	51	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

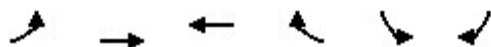
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	28.6%
Analysis Period (min)	15
	ICU Level of Service A

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	30	101	0	13	81	26	2	0	19	25	1	21
Future Vol, veh/h	30	101	0	13	81	26	2	0	19	25	1	21
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	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	110	0	14	88	28	2	0	21	27	1	23
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.1	7.9	7.2	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	23%	11%	53%
Vol Thru, %	0%	77%	68%	2%
Vol Right, %	90%	0%	22%	45%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	21	131	120	47
LT Vol	2	30	13	25
Through Vol	0	101	81	1
RT Vol	19	0	26	21
Lane Flow Rate	23	142	130	51
Geometry Grp	1	1	1	1
Degree of Util (X)	0.026	0.166	0.147	0.062
Departure Headway (Hd)	4.063	4.207	4.062	4.393
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	886	843	871	820
Service Time	2.065	2.28	2.142	2.394
HCM Lane V/C Ratio	0.026	0.168	0.149	0.062
HCM Control Delay	7.2	8.1	7.9	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.6	0.5	0.2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	268	20	11	508	732	53
Future Volume (vph)	268	20	11	508	732	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	35			55	450	0
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	1863	1863	1583	1770	1583
Flt Permitted	0.541				0.950	
Satd. Flow (perm)	1008	1863	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				552		58
Link Speed (mph)		30	30		30	
Link Distance (ft)		495	672		1044	
Travel Time (s)		11.3	15.3		23.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	291	22	12	552	796	58
Shared Lane Traffic (%)						
Lane Group Flow (vph)	291	22	12	552	796	58
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
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	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases	6			2		4
Detector Phase	1	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	11.5	11.5	11.5	11.0	11.0
Total Split (s)	12.0	44.0	32.0	32.0	21.0	21.0
Total Split (%)	18.5%	67.7%	49.2%	49.2%	32.3%	32.3%
Maximum Green (s)	8.0	40.0	28.0	28.0	17.0	17.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0

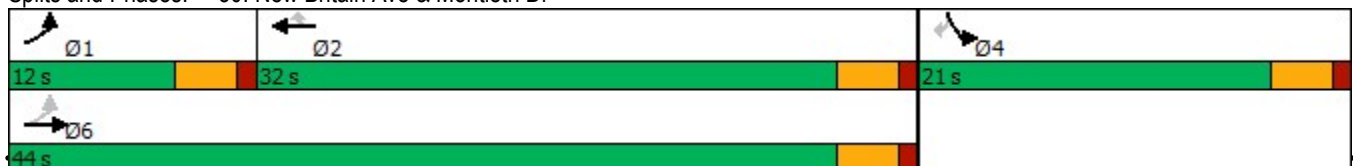


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag		Lag	
Lead-Lag Optimize?	Yes		Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Min	Min	Min	None	None
Walk Time (s)			7.0	7.0	7.0	7.0
Flash Dont Walk (s)			20.0	20.0	10.0	10.0
Pedestrian Calls (#/hr)			3	3	3	3
Act Effct Green (s)	22.5	22.5	10.3	10.3	17.4	17.4
Actuated g/C Ratio	0.47	0.47	0.21	0.21	0.36	0.36
v/c Ratio	0.49	0.03	0.03	0.72	1.24	0.10
Control Delay	10.6	6.0	12.9	7.4	142.8	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.6	6.0	12.9	7.4	142.8	5.9
LOS	B	A	B	A	F	A
Approach Delay		10.2	7.5		133.5	
Approach LOS		B	A		F	
Queue Length 50th (ft)	46	3	3	0	~249	0
Queue Length 95th (ft)	80	10	11	51	#663	24
Internal Link Dist (ft)		415	592		964	
Turn Bay Length (ft)	35			55	450	
Base Capacity (vph)	600	1588	1112	1167	641	610
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	0.48	0.01	0.01	0.47	1.24	0.10

Intersection Summary

Area Type: Other  
 Cycle Length: 65  
 Actuated Cycle Length: 48.1  
 Natural Cycle: 70  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.24  
 Intersection Signal Delay: 70.1  
 Intersection LOS: E  
 Intersection Capacity Utilization 68.7%  
 ICU Level of Service C  
 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: 30: New Britain Ave & Montieth Dr



Farmington Connectivity Study  
 1: Canton Rd (RT 179) & Spielman Hwy (RT 4)

2050 Scenario 4 (Route 177 & Build) Conditions

PM Peak



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	323	415	524	482	323	410
Future Volume (vph)	323	415	524	482	323	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260	0	0			0
Storage Lanes	1	1	0			0
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	0.99	
Frt		0.850			0.925	
Flt Protected	0.950			0.975		
Satd. Flow (prot)	1787	1599	0	1834	1720	0
Flt Permitted	0.950			0.244		
Satd. Flow (perm)	1787	1599	0	459	1720	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		423			100	
Link Speed (mph)	35			50	50	
Link Distance (ft)	986			565	665	
Travel Time (s)	19.2			7.7	9.1	
Confl. Peds. (#/hr)			1			1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	330	423	535	492	330	418
Shared Lane Traffic (%)						
Lane Group Flow (vph)	330	423	0	1027	748	0
Number of Detectors	1	1	1	1	1	
Detector Template			Left			
Leading Detector (ft)	40	40	20	40	40	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	40	40	20	40	40	
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	pm+ov	D.P+P	NA	NA	
Protected Phases	4	1	1	12	2	
Permitted Phases		4	2			
Detector Phase	4	1	1	2	2	
Switch Phase						
Minimum Initial (s)	6.0	6.0	6.0		20.0	
Minimum Split (s)	17.0	10.0	10.0		26.6	
Total Split (s)	29.0	10.0	10.0		46.6	
Total Split (%)	33.9%	11.7%	11.7%		54.4%	
Maximum Green (s)	25.0	6.0	6.0		40.0	
Yellow Time (s)	3.0	3.0	3.0		5.0	
All-Red Time (s)	1.0	1.0	1.0		1.6	
Lost Time Adjust (s)	0.0	0.0			0.0	

Farmington Connectivity Study  
 1: Canton Rd (RT 179) & Spielman Hwy (RT 4)

2050 Scenario 4 (Route 177 & Build) Conditions

PM Peak



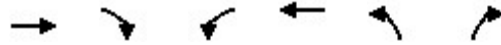
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Total Lost Time (s)	4.0	4.0			6.6	
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	1.0	3.0	3.0		5.0	
Recall Mode	None	Min	Min		Min	
Walk Time (s)	12.0					
Flash Dont Walk (s)	1.0					
Pedestrian Calls (#/hr)	1					
Act Effct Green (s)	17.5	27.6		48.8	40.2	
Actuated g/C Ratio	0.22	0.35		0.62	0.51	
v/c Ratio	0.83	0.51		2.63	0.80	
Control Delay	46.4	4.2		755.2	23.4	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	46.4	4.2		755.2	23.4	
LOS	D	A		F	C	
Approach Delay	22.7			755.2	23.4	
Approach LOS	C			F	C	
Queue Length 50th (ft)	154	0		~859	250	
Queue Length 95th (ft)	243	53		#1195	#546	
Internal Link Dist (ft)	906			485	585	
Turn Bay Length (ft)	260					
Base Capacity (vph)	572	836		391	930	
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	0.58	0.51		2.63	0.80	

Intersection Summary

Area Type: Other  
 Cycle Length: 85.6  
 Actuated Cycle Length: 78.4  
 Natural Cycle: 150  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 2.63  
 Intersection Signal Delay: 320.5  
 Intersection LOS: F  
 Intersection Capacity Utilization 126.6%  
 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.

Splits and Phases: 1: Canton Rd (RT 179) & Spielman Hwy (RT 4)





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	550	92	286	603	128	303
Future Volume (vph)	550	92	286	603	128	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		0	60
Storage Lanes		0	0		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.981					0.850
Flt Protected				0.984	0.950	
Satd. Flow (prot)	1845	0	0	1851	1787	1599
Flt Permitted				0.984	0.950	
Satd. Flow (perm)	1845	0	0	1851	1787	1599
Link Speed (mph)	30			30	25	
Link Distance (ft)	740			816	860	
Travel Time (s)	16.8			18.5	23.5	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	561	94	292	615	131	309
Shared Lane Traffic (%)						
Lane Group Flow (vph)	655	0	0	907	131	309
Sign Control	Free			Free	Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	99.2%
Analysis Period (min)	15
	ICU Level of Service F

Intersection						
Int Delay, s/veh	71.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	550	92	286	603	128	303
Future Vol, veh/h	550	92	286	603	128	303
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	60
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	561	94	292	615	131	309

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	655	0	1807 608
Stage 1	-	-	-	-	608 -
Stage 2	-	-	-	-	1199 -
Critical Hdwy	-	-	4.11	-	6.41 6.21
Critical Hdwy Stg 1	-	-	-	-	5.41 -
Critical Hdwy Stg 2	-	-	-	-	5.41 -
Follow-up Hdwy	-	-	2.209	-	3.509 3.309
Pot Cap-1 Maneuver	-	-	937	-	~ 87 498
Stage 1	-	-	-	-	545 -
Stage 2	-	-	-	-	287 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	937	-	~ 46 498
Mov Cap-2 Maneuver	-	-	-	-	~ 46 -
Stage 1	-	-	-	-	545 -
Stage 2	-	-	-	-	151 -

Approach	EB	WB	NB
HCM Control Delay, s	0	3.4	\$ 318.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	46	498	-	-	937	-
HCM Lane V/C Ratio	2.839	0.621	-	-	0.311	-
HCM Control Delay (s)	\$ 1018	23.3	-	-	10.6	0
HCM Lane LOS	F	C	-	-	B	A
HCM 95th %tile Q(veh)	14.1	4.2	-	-	1.3	-

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

Farmington Connectivity Study 2050 Scenario 4 (Route 177 & Build) Conditions  
 3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



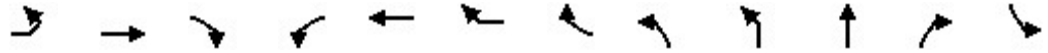
Lane Group	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL
Lane Configurations		↑↑			↑	↑			↑	↑	↑	↑
Traffic Volume (vph)	9	147	2	1	42	424	63	1	0	0	0	72
Future Volume (vph)	9	147	2	1	42	424	63	1	0	0	0	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)			50	0		0			0		145	110
Storage Lanes			1	0		1			1		1	1
Taper Length (ft)				25					25			50
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00							1.00
Frt		0.998				0.850						
Flt Protected		0.997			0.999				0.950			0.950
Satd. Flow (prot)	0	3521	0	0	1861	1583	0	0	1770	1863	1863	1770
Flt Permitted		0.943			0.995				0.754			0.757
Satd. Flow (perm)	0	3330	0	0	1853	1583	0	0	1405	1863	1863	1405
Right Turn on Red			No				No				Yes	
Satd. Flow (RTOR)												
Link Speed (mph)		25			30				25			
Link Distance (ft)		761			292				461			
Travel Time (s)		20.8			6.6				12.6			
Confl. Peds. (#/hr)			1	1							2	2
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	9	148	2	1	42	428	64	1	0	0	0	73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	159	0	0	43	492	0	0	1	0	0	73
Number of Detectors	1	1		1	1	1		1	1	0	0	1
Detector Template	Left			Left				Left				
Leading Detector (ft)	20	44		20	44	44		20	44	0	0	44
Trailing Detector (ft)	0	-6		0	-6	-6		0	-6	0	0	-6
Detector 1 Position(ft)	0	-6		0	-6	-6		0	-6	0	0	-6
Detector 1 Size(ft)	20	50		20	50	50		20	50	6	20	50
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	NA	pt+ov		D.P+P	D.P+P		Free	Perm
Protected Phases		4			4	4.5		1	1	1.2		
Permitted Phases	4			4				2	2		Free	2
Detector Phase	4	4		4	4	4		1	1	2		2
Switch Phase												
Minimum Initial (s)	9.0	9.0		9.0	9.0			5.0	5.0			15.0
Minimum Split (s)	14.0	14.0		14.0	14.0			9.0	9.0			21.0
Total Split (s)	37.0	37.0		37.0	37.0			9.0	9.0			25.0
Total Split (%)	29.8%	29.8%		29.8%	29.8%			7.3%	7.3%			20.2%
Maximum Green (s)	32.0	32.0		32.0	32.0			5.0	5.0			19.0
Yellow Time (s)	4.0	4.0		4.0	4.0			3.0	3.0			4.0
All-Red Time (s)	1.0	1.0		1.0	1.0			1.0	1.0			2.0
Lost Time Adjust (s)		0.0			0.0				0.0			0.0
Total Lost Time (s)		5.0			5.0				4.0			6.0

Farmington Connectivity Study 2050 Scenario 4 (Route 177 & Build) Conditions  
 3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)



Lane Group	SBT	SBR	SBR2	SEL2	SEL	SER	SER2	Ø3
Lane Configurations								
Traffic Volume (vph)	0	3	9	8	429	1	5	
Future Volume (vph)	0	3	9	8	429	1	5	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)		60			0	255		
Storage Lanes		1			1	1		
Taper Length (ft)					25			
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	
Ped Bike Factor					1.00			
Frt	0.850		0.850			0.850		
Flt Protected					0.950			
Satd. Flow (prot)	1504	0	1504	0	1770	1583	0	
Flt Permitted					0.990			
Satd. Flow (perm)	1504	0	1504	0	1841	1583	0	
Right Turn on Red			Yes				No	
Satd. Flow (RTOR)	132		185					
Link Speed (mph)	35				30			
Link Distance (ft)	785				820			
Travel Time (s)	15.3				18.6			
Confl. Peds. (#/hr)					2	1		
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Adj. Flow (vph)	0	3	9	8	433	1	5	
Shared Lane Traffic (%)			33%					
Lane Group Flow (vph)	6	0	6	0	441	6	0	
Number of Detectors	1		0	1	1	1		
Detector Template				Left				
Leading Detector (ft)	206		0	20	44	44		
Trailing Detector (ft)	200		0	0	-6	-6		
Detector 1 Position(ft)	200		0	0	-6	-6		
Detector 1 Size(ft)	6		20	20	50	50		
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	NA		Free	D.Pm	Prot	Prot		
Protected Phases	2				5	5	3	
Permitted Phases			Free	5				
Detector Phase	2			5	5	5		
Switch Phase								
Minimum Initial (s)	15.0			9.0	9.0	9.0	1.0	
Minimum Split (s)	21.0			14.0	14.0	14.0	23.0	
Total Split (s)	25.0			30.0	30.0	30.0	23.0	
Total Split (%)	20.2%			24.2%	24.2%	24.2%	19%	
Maximum Green (s)	19.0			25.0	25.0	25.0	19.0	
Yellow Time (s)	4.0			4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0			1.0	1.0	1.0	0.0	
Lost Time Adjust (s)	0.0				0.0	0.0		
Total Lost Time (s)	6.0				5.0	5.0		

Farmington Connectivity Study 2050 Scenario 4 (Route 177 & Build) Conditions  
**3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)**

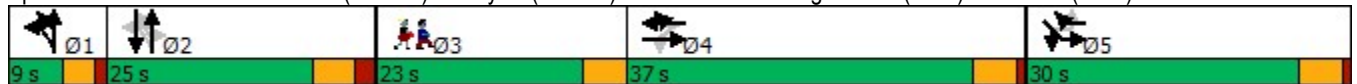


Lane Group	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL
Lead/Lag	Lag	Lag		Lag	Lag			Lead	Lead			Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes			Yes	Yes			Yes
Vehicle Extension (s)	1.5	1.5		1.5	1.5			1.5	1.5			2.5
Recall Mode	None	None		None	None			None	None			Min
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		17.7			17.7	49.1			18.5			15.7
Actuated g/C Ratio		0.22			0.22	0.61			0.23			0.19
v/c Ratio		0.22			0.11	0.51			0.00			0.27
Control Delay		27.4			27.5	13.2			31.0			36.7
Queue Delay		0.0			0.0	0.0			0.0			0.0
Total Delay		27.4			27.5	13.2			31.0			36.7
LOS		C			C	B			C			D
Approach Delay		27.4			14.4					31.0		
Approach LOS		C			B					C		
Queue Length 50th (ft)		30			15	99			0			27
Queue Length 95th (ft)		79			55	371			6			103
Internal Link Dist (ft)		681			212					381		
Turn Bay Length (ft)												110
Base Capacity (vph)		1383			770	964			345			346
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		0.11			0.06	0.51			0.00			0.21

**Intersection Summary**

Area Type: Other  
 Cycle Length: 124  
 Actuated Cycle Length: 80.6  
 Natural Cycle: 85  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 25.3 Intersection LOS: C  
 Intersection Capacity Utilization 57.8% 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.

**Splits and Phases: 3: S Main St (RT 177)/Lovely St (RT 177) & School St/Farmington Ave (RT 4) & Main St (RT 4)**



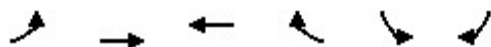


Lane Group	SBT	SBR	SBR2	SEL2	SEL	SER	SER2	Ø3
Lead/Lag	Lag							Lead
Lead-Lag Optimize?	Yes							Yes
Vehicle Extension (s)	2.5		1.5		1.5	1.5		3.0
Recall Mode	Min		None		None	None		None
Walk Time (s)								7.0
Flash Dont Walk (s)								12.0
Pedestrian Calls (#/hr)								3
Act Effct Green (s)	15.7		80.6		26.2	26.2		
Actuated g/C Ratio	0.19		1.00		0.33	0.33		
v/c Ratio	0.02		0.00		0.74	0.01		
Control Delay	0.0		0.0		36.4	27.7		
Queue Delay	0.0		0.0		0.0	0.0		
Total Delay	0.0		0.0		36.4	27.7		
LOS	A		A		D	C		
Approach Delay	31.5				36.3			
Approach LOS	C				D			
Queue Length 50th (ft)	0		0		165	2		
Queue Length 95th (ft)	0		0		#605	16		
Internal Link Dist (ft)	705				740			
Turn Bay Length (ft)			60				255	
Base Capacity (vph)	470		1504		597	513		
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		0.00		0.74	0.01		
<b>Intersection Summary</b>								

Farmington Connectivity Study  
 4: Farmington Ave (RT 4) & W Avon Rd (RT 167)

2050 Scenario 4 (Route 177 & Build) Conditions

PM Peak

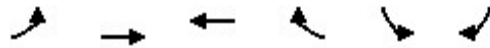


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3
Lane Configurations							
Traffic Volume (vph)	96	809	649	170	196	157	
Future Volume (vph)	96	809	649	170	196	157	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	365			0	0	0	
Storage Lanes	1			0	1	0	
Taper Length (ft)	50				25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Frt			0.972		0.940		
Flt Protected	0.950				0.973		
Satd. Flow (prot)	1787	1881	1829	0	1721	0	
Flt Permitted	0.166				0.973		
Satd. Flow (perm)	312	1881	1829	0	1721	0	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			13		26		
Link Speed (mph)		30	35		30		
Link Distance (ft)		1079	965		1192		
Travel Time (s)		24.5	18.8		27.1		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	
Adj. Flow (vph)	98	826	662	173	200	160	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	98	826	835	0	360	0	
Number of Detectors	1	2	2		1		
Detector Template							
Leading Detector (ft)	24	246	246		24		
Trailing Detector (ft)	-6	120	120		-6		
Detector 1 Position(ft)	-6	120	120		-6		
Detector 1 Size(ft)	30	6	6		30		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		
Detector 2 Position(ft)		240	240				
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.P+P	NA	NA		Prot		
Protected Phases	1	1 2	2		4	3	
Permitted Phases	2						
Detector Phase	1	2	2		4		
Switch Phase							
Minimum Initial (s)	5.0		15.0		7.0	1.0	
Minimum Split (s)	9.5		22.5		22.5	23.0	
Total Split (s)	19.0		65.5		27.0	23.0	
Total Split (%)	14.1%		48.7%		20.1%	17%	
Maximum Green (s)	15.0		60.0		23.0	19.0	

Farmington Connectivity Study  
 4: Farmington Ave (RT 4) & W Avon Rd (RT 167)

2050 Scenario 4 (Route 177 & Build) Conditions

PM Peak

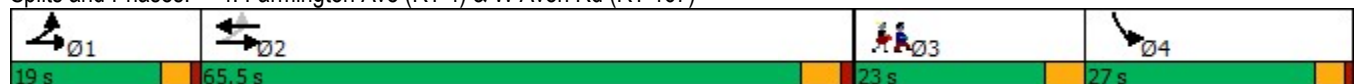


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø3
Yellow Time (s)	3.0		4.0		3.0		4.0
All-Red Time (s)	1.0		1.5		1.0		0.0
Lost Time Adjust (s)	0.0		0.0		0.0		
Total Lost Time (s)	4.0		5.5		4.0		
Lead/Lag	Lead		Lag		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	1.5		2.5		2.0		3.0
Recall Mode	None		Min		None		None
Walk Time (s)							7.0
Flash Dont Walk (s)							11.0
Pedestrian Calls (#/hr)							0
Act Effct Green (s)	68.0	72.0	60.0		23.0		
Actuated g/C Ratio	0.66	0.70	0.58		0.22		
v/c Ratio	0.33	0.63	0.78		0.89		
Control Delay	8.0	10.9	22.9		61.6		
Queue Delay	0.0	0.0	0.0		0.0		
Total Delay	8.0	10.9	22.9		61.6		
LOS	A	B	C		E		
Approach Delay		10.6	22.9		61.6		
Approach LOS		B	C		E		
Queue Length 50th (ft)	18	256	382		214		
Queue Length 95th (ft)	34	365	604		#400		
Internal Link Dist (ft)		999	885		1112		
Turn Bay Length (ft)	365						
Base Capacity (vph)	432	1314	1070		404		
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	0.23	0.63	0.78		0.89		

Intersection Summary

Area Type: Other  
 Cycle Length: 134.5  
 Actuated Cycle Length: 103  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.89  
 Intersection Signal Delay: 24.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 81.5%  
 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: 4: Farmington Ave (RT 4) & W Avon Rd (RT 167)



Farmington Connectivity Study  
 5: Montieth Dr/Monteith Dr & Farmington Ave (RT 4)

2050 Scenario 4 (Route 177 & Build) Conditions

PM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	607	348	249	557	31	435	70	258	10	31	12
Future Volume (vph)	70	607	348	249	557	31	435	70	258	10	31	12
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120		0	280		55	245		75	0		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.947				0.850			0.850		0.956	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1787	0	1770	1900	1615	1770	1863	1583	1805	1791	0
Flt Permitted	0.340			0.085			0.460			0.708		
Satd. Flow (perm)	646	1787	0	158	1900	1615	857	1863	1583	1345	1791	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30				119			280			14
Link Speed (mph)		35			35			30				25
Link Distance (ft)		784			925			1044				548
Travel Time (s)		15.3			18.0			23.7				14.9
Peak Hour Factor	0.88	0.88	0.92	0.92	0.88	0.88	0.92	0.92	0.92	0.88	0.92	0.88
Heavy Vehicles (%)	0%	0%	2%	2%	0%	0%	2%	2%	2%	0%	2%	0%
Adj. Flow (vph)	80	690	378	271	633	35	473	76	280	11	34	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	80	1068	0	271	633	35	473	76	280	11	48	0
Number of Detectors	1	0		1	1	1	1	2	1	3	2	
Detector Template	Left			Left		Right	Left	Thru	Right		Thru	
Leading Detector (ft)	20	0		20	356	20	20	100	20	24	100	
Trailing Detector (ft)	0	0		0	350	0	0	0	0	-6	0	
Detector 1 Position(ft)	0	0		0	350	0	0	0	0	-6	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)								94		6		94
Detector 2 Size(ft)								6		6		6
Detector 2 Type								Cl+Ex		Cl+Ex		Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)								0.0		0.0		0.0
Detector 3 Position(ft)										18		
Detector 3 Size(ft)										6		
Detector 3 Type										Cl+Ex		
Detector 3 Channel												
Detector 3 Extend (s)										0.0		
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6			2		2	8		8	4		
Detector Phase	1	6		5	2	2	3	8	8	7	4	
Switch Phase												

Farmington Connectivity Study  
5: Montieth Dr/Monteith Dr & Farmington Ave (RT 4)

2050 Scenario 4 (Route 177 & Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	15.0	15.0	5.0	15.0	15.0	5.0	5.0	
Minimum Split (s)	9.0	22.5		9.5	23.4	23.4	9.5	23.4	23.4	16.0	22.5	
Total Split (s)	10.0	38.0		17.0	45.0	45.0	17.0	28.0	28.0	17.0	28.0	
Total Split (%)	10.0%	38.0%		17.0%	45.0%	45.0%	17.0%	28.0%	28.0%	17.0%	28.0%	
Maximum Green (s)	6.0	33.5		12.5	39.6	39.6	12.5	22.6	22.6	13.0	23.5	
Yellow Time (s)	3.0	3.5		3.5	4.4	4.4	3.5	4.4	4.4	3.0	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.5		4.5	5.4	5.4	4.5	5.4	5.4	4.0	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	1.5	3.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None	None	None	None	
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0			0	0		0	0		0	
Act Effct Green (s)	54.5	46.9		67.8	57.8	57.8	23.2	20.4	20.4	11.9	7.5	
Actuated g/C Ratio	0.54	0.47		0.68	0.58	0.58	0.23	0.20	0.20	0.12	0.08	
v/c Ratio	0.18	1.25		0.73	0.58	0.04	1.48	0.20	0.51	0.06	0.33	
Control Delay	8.5	149.1		32.4	17.9	0.1	263.5	34.5	8.1	28.6	39.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	8.5	149.1		32.4	17.9	0.1	263.5	34.5	8.1	28.6	39.0	
LOS	A	F		C	B	A	F	C	A	C	D	
Approach Delay		139.3			21.4			156.3			37.0	
Approach LOS		F			C			F			D	
Queue Length 50th (ft)	16	~866		107	258	0	~347	39	0	5	21	
Queue Length 95th (ft)	33	#1175		192	399	0	#594	85	72	18	55	
Internal Link Dist (ft)		704			845			964			468	
Turn Bay Length (ft)	120			280		55	245		75			
Base Capacity (vph)	435	854		376	1097	982	319	431	581	326	431	
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	0.18	1.25		0.72	0.58	0.04	1.48	0.18	0.48	0.03	0.11	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 10 (10%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.48

Intersection Signal Delay: 104.8

Intersection LOS: F

Intersection Capacity Utilization 109.7%

ICU Level of Service H

Analysis Period (min) 15

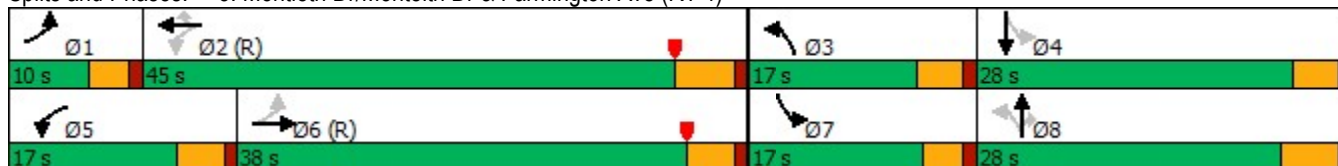
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.























Splits and Phases: 5: Montieth Dr/Monteith Dr & Farmington Ave (RT 4)



Farmington Connectivity Study  
 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)

2050 Scenario 4 (Route 177 & Build) Conditions

PM Peak

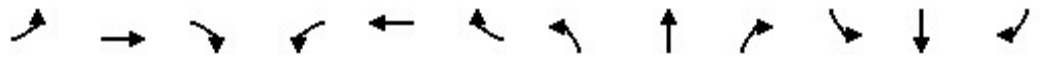
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	735	49	61	689	298	71	49	72	330	36	110
Future Volume (vph)	108	735	49	61	689	298	71	49	72	330	36	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90		0	90		90	0		0	150		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	65			110			25			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00				0.99		1.00		
Frt		0.991				0.850		0.911				0.887
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1843	0	1770	1863	1583	1770	1672	0	1770	1652	0
Flt Permitted	0.105			0.122			0.417			0.553		
Satd. Flow (perm)	196	1843	0	227	1863	1583	777	1672	0	1028	1652	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				166		46				96
Link Speed (mph)		40			40			30				35
Link Distance (ft)		635			779			428				768
Travel Time (s)		10.8			13.3			9.7				15.0
Confl. Peds. (#/hr)			1	1					1	1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	114	774	52	64	725	314	75	52	76	347	38	116
Shared Lane Traffic (%)												
Lane Group Flow (vph)	114	826	0	64	725	314	75	128	0	347	154	0
Number of Detectors	1	2		1	2	0	1	1		1	1	
Detector Template												
Leading Detector (ft)	40	256		45	336	0	45	40		40	40	
Trailing Detector (ft)	-10	150		-5	230	0	-5	-10		-10	-10	
Detector 1 Position(ft)	-10	150		-5	230	0	-5	-10		-10	-10	
Detector 1 Size(ft)	50	6		50	6	20	50	50		50	50	
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)		250			330							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	pm+pt	NA		pm+pt	NA	Prot	pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2	2	7	8		7	8	
Permitted Phases	6			2			8			8		
Detector Phase	1	1		5	2	2	7	8		7	8	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	5.0	7.0		5.0	7.0	
Minimum Split (s)	10.4	22.0		10.4	22.0	22.0	10.9	14.0		10.9	14.0	
Total Split (s)	15.0	43.0		15.0	43.0	43.0	22.0	20.0		22.0	20.0	
Total Split (%)	11.8%	33.9%		11.8%	33.9%	33.9%	17.3%	15.7%		17.3%	15.7%	

Lane Group	Ø3
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	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
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	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	27.0
Total Split (s)	27.0
Total Split (%)	21%

Farmington Connectivity Study  
6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)

2050 Scenario 4 (Route 177 & Build) Conditions

PM Peak

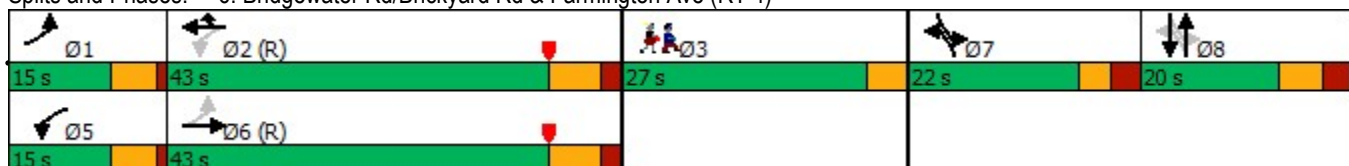


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	9.6	36.0		9.6	36.0	36.0	16.1	13.0		16.1	13.0	
Yellow Time (s)	4.4	5.0		4.4	5.0	5.0	3.0	4.1		3.0	4.1	
All-Red Time (s)	1.0	2.0		1.0	2.0	2.0	2.9	2.9		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	7.0		5.4	7.0	7.0	5.9	7.0		5.9	7.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effect Green (s)	64.8	54.0		44.6	36.0	36.0	38.5	10.6		38.5	10.6	
Actuated g/C Ratio	0.51	0.43		0.35	0.28	0.28	0.30	0.08		0.30	0.08	
v/c Ratio	0.30	1.05		0.39	1.37	0.55	0.17	0.71		0.74	0.68	
Control Delay	21.1	83.1		26.6	215.6	21.7	30.0	56.7		45.7	38.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	21.1	83.1		26.6	215.6	21.7	30.0	56.7		45.7	38.4	
LOS	C	F		C	F	C	C	E		D	D	
Approach Delay		75.6			149.4			46.8			43.4	
Approach LOS		E			F			D			D	
Queue Length 50th (ft)	45	~743		25	~788	100	40	66		219	46	
Queue Length 95th (ft)	104	#1220		62	#1027	197	87	133		#395	119	
Internal Link Dist (ft)		555			699			348			688	
Turn Bay Length (ft)	90			90		90				150		
Base Capacity (vph)	383	785		201	528	567	445	213		468	256	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.30	1.05		0.32	1.37	0.55	0.17	0.60		0.74	0.60	

Intersection Summary

Area Type: Other  
 Cycle Length: 127  
 Actuated Cycle Length: 127  
 Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 145  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.37  
 Intersection Signal Delay: 97.3      Intersection LOS: F  
 Intersection Capacity Utilization 92.3%      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.

Splits and Phases: 6: Bridgewater Rd/Brickyard Rd & Farmington Ave (RT 4)



Lane Group	Ø3
Maximum Green (s)	23.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
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)	16.0
Pedestrian Calls (#/hr)	2
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	

Farmington Connectivity Study  
7: Garden St & Farmington Ave (RT 4)

2050 Scenario 4 (Route 177 & Build) Conditions

PM Peak



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø4
Lane Configurations	↑↑		↙	↑	↘			
Traffic Volume (vph)	1245	121	14	872	122	16		
Future Volume (vph)	1245	121	14	872	122	16		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Storage Length (ft)		0	200		0	0		
Storage Lanes		0	1		1	0		
Taper Length (ft)			50		25			
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00		
Ped Bike Factor	1.00		1.00		0.99			
Frt	0.987				0.984			
Flt Protected			0.950		0.958			
Satd. Flow (prot)	3520	0	1787	1881	1773	0		
Flt Permitted			0.140		0.958			
Satd. Flow (perm)	3520	0	263	1881	1749	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)	11				4			
Link Speed (mph)	30			30	25			
Link Distance (ft)	1042			566	488			
Travel Time (s)	23.7			12.9	13.3			
Confl. Peds. (#/hr)		6	6		5			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%		
Adj. Flow (vph)	1324	129	15	928	130	17		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	1453	0	15	928	147	0		
Number of Detectors	0		0	0	3			
Detector Template								
Leading Detector (ft)	0		0	0	24			
Trailing Detector (ft)	0		0	0	-6			
Detector 1 Position(ft)	0		0	0	-6			
Detector 1 Size(ft)	6		20	6	6			
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel								
Detector 1 Extend (s)	0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0		0.0	0.0	0.0			
Detector 2 Position(ft)					6			
Detector 2 Size(ft)					6			
Detector 2 Type					Cl+Ex			
Detector 2 Channel								
Detector 2 Extend (s)					0.0			
Detector 3 Position(ft)					18			
Detector 3 Size(ft)					6			
Detector 3 Type					Cl+Ex			
Detector 3 Channel								
Detector 3 Extend (s)					0.0			
Turn Type	NA		Perm	NA	Prot			
Protected Phases	2 4			2	5		3	4
Permitted Phases			2					

Farmington Connectivity Study  
7: Garden St & Farmington Ave (RT 4)

2050 Scenario 4 (Route 177 & Build) Conditions  
PM Peak

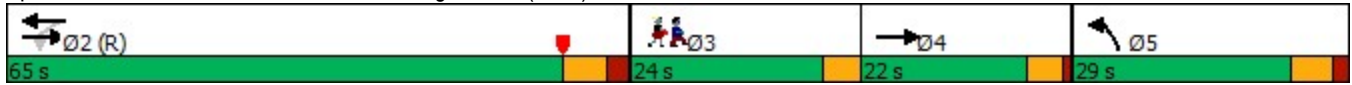


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø3	Ø4
Detector Phase	2		2	2	5			
Switch Phase								
Minimum Initial (s)			15.0	15.0	7.0		7.0	6.0
Minimum Split (s)			22.1	22.1	13.3		24.0	10.8
Total Split (s)			65.0	65.0	29.0		24.0	22.0
Total Split (%)			46.4%	46.4%	20.7%		17%	16%
Maximum Green (s)			57.9	57.9	22.7		20.0	17.2
Yellow Time (s)			4.6	4.6	4.5		4.0	3.8
All-Red Time (s)			2.5	2.5	1.8		0.0	1.0
Lost Time Adjust (s)			0.0	0.0	0.0			
Total Lost Time (s)			7.1	7.1	6.3			
Lead/Lag							Lead	Lag
Lead-Lag Optimize?							Yes	Yes
Vehicle Extension (s)			3.0	3.0	1.5		3.0	1.5
Recall Mode			C-Max	C-Max	None		None	None
Walk Time (s)							7.0	
Flash Dont Walk (s)							13.0	
Pedestrian Calls (#/hr)							11	
Act Effct Green (s)	101.7		101.7	101.7	15.3			
Actuated g/C Ratio	0.73		0.73	0.73	0.11			
v/c Ratio	0.57		0.08	0.68	0.75			
Control Delay	12.8		2.7	9.6	80.6			
Queue Delay	0.1		0.0	0.8	0.0			
Total Delay	12.9		2.7	10.4	80.6			
LOS	B		A	B	F			
Approach Delay	12.9			10.3	80.6			
Approach LOS	B			B	F			
Queue Length 50th (ft)	203		1	39	128			
Queue Length 95th (ft)	559		m1	m179	196			
Internal Link Dist (ft)	962			486	408			
Turn Bay Length (ft)			200					
Base Capacity (vph)	2560		191	1366	290			
Starvation Cap Reductn	0		0	181	0			
Spillback Cap Reductn	204		0	0	0			
Storage Cap Reductn	0		0	0	0			
Reduced v/c Ratio	0.62		0.08	0.78	0.51			

**Intersection Summary**

Area Type: Other  
 Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 30 (21%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.75  
 Intersection Signal Delay: 15.8 Intersection LOS: B  
 Intersection Capacity Utilization 64.8% ICU Level of Service C  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Garden St & Farmington Ave (RT 4)

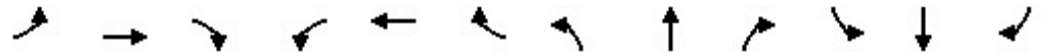




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1036	230	84	713	97	185	143	81	225	172	9
Future Volume (vph)	1	1036	230	84	713	97	185	143	81	225	172	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	255		0	100		50	0		0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (ft)	65			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor							0.99					1.00
Frt			0.850		0.982				0.850			0.997
Flt Protected	0.950			0.950			0.950					0.973
Satd. Flow (prot)	1787	3574	1599	1787	1847	0	1787	1881	1599	0	1824	0
Flt Permitted	0.098			0.087			0.950					0.973
Satd. Flow (perm)	184	3574	1599	164	1847	0	1775	1881	1599	0	1824	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30				30
Link Distance (ft)		566			848			677				693
Travel Time (s)		12.9			19.3			15.4				15.8
Confl. Peds. (#/hr)							2					2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	1	1057	235	86	728	99	189	146	83	230	176	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	1057	235	86	827	0	189	146	83	0	415	0
Number of Detectors	3	3	4	1	1		3	3	2	1	2	
Detector Template										Left		
Leading Detector (ft)	30	30	36	34	34		30	30	48	20	48	
Trailing Detector (ft)	0	0	-6	0	0		0	0	0	0	-6	
Detector 1 Position(ft)	0	0	-6	0	0		0	0	0	0	-6	
Detector 1 Size(ft)	6	6	6	34	34		6	6	12	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	12	12	6				12	12	18		6	
Detector 2 Size(ft)	6	6	6				6	6	30		42	
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0	0.0				0.0	0.0	0.0		0.0	
Detector 3 Position(ft)	24	24	18				24	24				
Detector 3 Size(ft)	6	6	6				6	6				
Detector 3 Type	Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex				
Detector 3 Channel												
Detector 3 Extend (s)	0.0	0.0	0.0				0.0	0.0				
Detector 4 Position(ft)			30									
Detector 4 Size(ft)			6									
Detector 4 Type			Cl+Ex									

Lane Group	Ø3
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)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Detector 4 Position(ft)	
Detector 4 Size(ft)	
Detector 4 Type	

Farmington Connectivity Study 2050 Scenario 4 (Route 177 & Build) Conditions  
 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4) PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 4 Channel												
Detector 4 Extend (s)	0.0											
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Split	NA	pt+ov	Split	NA	
Protected Phases	1	6		5	2		7	7	5 7	4	4	
Permitted Phases	6		6	2								
Detector Phase	1	6	6	5	2		7	7	7	4	4	
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	7.0	20.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	9.5	27.3	27.3	12.0	27.3		13.0	13.0		22.5	22.5	
Total Split (s)	13.0	44.0	44.0	13.0	44.0		25.0	25.0		34.0	34.0	
Total Split (%)	9.3%	31.4%	31.4%	9.3%	31.4%		17.9%	17.9%		24.3%	24.3%	
Maximum Green (s)	9.0	36.7	36.7	8.0	36.7		19.0	19.0		28.3	28.3	
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	2.8	2.8	2.0	2.8		3.0	3.0		2.7	2.7	
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	7.3	7.3	5.0	7.3		6.0	6.0				5.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag					Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes					Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None		None	None	
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										5.0	5.0	
Pedestrian Calls (#/hr)										2	2	
Act Effct Green (s)	52.4	44.1	44.1	59.0	55.1		18.2	18.2	32.1		41.1	
Actuated g/C Ratio	0.37	0.32	0.32	0.42	0.39		0.13	0.13	0.23		0.29	
v/c Ratio	0.01	0.94	0.47	0.54	1.14		0.81	0.60	0.23		0.78	
Control Delay	14.0	50.5	30.1	42.6	115.1		84.7	67.5	44.7		57.0	
Queue Delay	0.0	4.0	0.0	0.0	0.0		12.0	0.0	0.0		0.0	
Total Delay	14.0	54.5	30.1	42.6	115.1		96.6	67.5	44.7		57.0	
LOS	B	D	C	D	F		F	E	D		E	
Approach Delay		50.1			108.3			76.1			57.0	
Approach LOS		D			F			E			E	
Queue Length 50th (ft)	0	481	168	49	~828		168	126	61		344	
Queue Length 95th (ft)	m1	#725	220	m96	#1302		#289	201	110		#648	
Internal Link Dist (ft)		486			768			597			613	
Turn Bay Length (ft)	100		150	255			100		50			
Base Capacity (vph)	177	1124	503	165	726		253	267	359		534	
Starvation Cap Reductn	0	40	0	0	0		0	0	0		0	
Spillback Cap Reductn	0	0	0	0	0		45	0	0		0	
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	
Reduced v/c Ratio	0.01	0.98	0.47	0.52	1.14		0.91	0.55	0.23		0.78	

Intersection Summary

Area Type: Other  
 Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 20 (14%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated

Lane Group	Ø3
Detector 4 Channel	
Detector 4 Extend (s)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	25.0
Total Split (s)	24.0
Total Split (%)	17%
Maximum Green (s)	20.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	13.0
Pedestrian Calls (#/hr)	2
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	

Maximum v/c Ratio: 1.14

Intersection Signal Delay: 72.1

Intersection LOS: E

Intersection Capacity Utilization 99.0%

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.

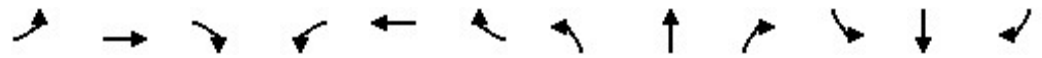
Splits and Phases: 8: Main St/Waterville Rd (RT 10) & Farmington Ave (RT 4)

 Ø1	 Ø2 (R)	 Ø3	 Ø4	 Ø7
13 s	44 s	24 s	34 s	25 s
 Ø5	 Ø6 (R)			
13 s	44 s			

Farmington Connectivity Study  
 9: High St/Backage Rd & Farmington Ave (RT 4)

2050 Scenario 4 (Route 177 & Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	1318	45	48	853	5	77	1	76	6	3	3
Future Volume (vph)	7	1318	45	48	853	5	77	1	76	6	3	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	85		100	115		0	0		85	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	70			115			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			0.99	
Frt		0.995			0.999				0.850		0.966	
Flt Protected	0.950			0.950				0.953			0.976	
Satd. Flow (prot)	1770	3522	0	1770	1861	0	0	1775	1583	0	1744	0
Flt Permitted	0.226			0.134								
Satd. Flow (perm)	421	3522	0	250	1861	0	0	1855	1583	0	1784	0
Right Turn on Red			Yes			Yes			Yes			No
Satd. Flow (RTOR)		3							91			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		848			473			291			375	
Travel Time (s)		19.3			10.8			6.6			8.5	
Confl. Peds. (#/hr)							1		1	1		1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	7	1373	47	50	889	5	80	1	79	6	3	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	1420	0	50	894	0	0	81	79	0	12	0
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template							Left			Left		
Leading Detector (ft)	40	40		25	25		20	35	35	20	30	
Trailing Detector (ft)	0	0		-10	-10		0	0	0	0	0	
Detector 1 Position(ft)	0	0		-10	-10		0	0	0	0	0	
Detector 1 Size(ft)	40	40		35	35		20	35	35	20	30	
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	pm+pt	NA		pm+pt	NA		D.P+P	NA	Prot	Perm	NA	
Protected Phases	1	6		5	2		4	4 7	4 7		7	
Permitted Phases	6			2			7			7		
Detector Phase	1	6		5	2		4	4	4	7	7	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		7.0			7.0	7.0	
Minimum Split (s)	9.0	21.7		9.0	21.7		11.7			12.0	12.0	
Total Split (s)	12.0	75.0		14.0	77.0		12.0			15.0	15.0	
Total Split (%)	8.6%	53.6%		10.0%	55.0%		8.6%			10.7%	10.7%	
Maximum Green (s)	8.0	68.3		10.0	70.3		7.3			10.0	10.0	
Yellow Time (s)	3.0	4.5		3.0	4.5		3.0			3.0	3.0	
All-Red Time (s)	1.0	2.2		1.0	2.2		1.7			2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0						0.0	
Total Lost Time (s)	4.0	6.7		4.0	6.7						5.0	

Lane Group	Ø3
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	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	24.0
Total Split (s)	24.0
Total Split (%)	17%
Maximum Green (s)	20.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	

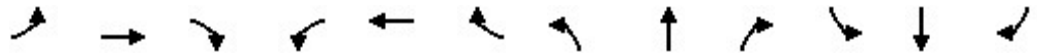


Lane Group	Ø3
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	13.0
Pedestrian Calls (#/hr)	4
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 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	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	10	9	8	61	1	95	3	510	56	59	643	37
Future Volume (vph)	10	9	8	61	1	95	3	510	56	59	643	37
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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00							
Frt		0.959			0.918			0.987			0.993	
Flt Protected		0.982			0.981			0.996			0.932	
Satd. Flow (prot)	0	1760	0	0	1694	0	0	1857	0	0	1861	0
Flt Permitted		0.892			0.860			0.996			0.932	
Satd. Flow (perm)	0	1598	0	0	1484	0	0	1849	0	0	1741	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			61			6			3	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		360			802			2590			707	
Travel Time (s)		8.2			18.2			44.1			12.1	
Confl. Peds. (#/hr)			1	1								
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	11	10	9	68	1	106	3	567	62	66	714	41
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	30	0	0	175	0	0	632	0	0	821	0
Number of Detectors	1	1		1	1		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	22		20	22		20	206		20	206	
Trailing Detector (ft)	0	-10		0	-10		0	100		0	100	
Detector 1 Position(ft)	0	-10		0	-10		0	100		0	100	
Detector 1 Size(ft)	20	32		20	32		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)								200			200	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		D.P+P	NA	
Protected Phases		4			4			2		1	12	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		1	1	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0		5.0		
Minimum Split (s)	12.0	12.0		12.0	12.0		21.6	21.6		9.0		
Total Split (s)	30.0	30.0		30.0	30.0		51.6	51.6		12.0		
Total Split (%)	26.0%	26.0%		26.0%	26.0%		44.6%	44.6%		10.4%		
Maximum Green (s)	25.0	25.0		25.0	25.0		45.0	45.0		8.0		
Yellow Time (s)	3.3	3.3		3.3	3.3		4.2	4.2		3.0		

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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)	
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	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	22.0
Total Split (s)	22.0
Total Split (%)	19%
Maximum Green (s)	18.0
Yellow Time (s)	4.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	1.7	1.7		1.7	1.7		2.4	2.4		1.0		
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.0			5.0			6.6				
Lead/Lag	Lag	Lag		Lag	Lag		Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes		
Vehicle Extension (s)	1.5	1.5		1.5	1.5		2.5	2.5		3.0		
Recall Mode	None	None		None	None		Min	Min		None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		11.2			11.2			27.5				39.1
Actuated g/C Ratio		0.17			0.17			0.41				0.58
v/c Ratio		0.11			0.59			0.83				0.80
Control Delay		24.8			29.1			30.0				19.5
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		24.8			29.1			30.0				19.5
LOS		C			C			C				B
Approach Delay		24.8			29.1			30.0				19.5
Approach LOS		C			C			C				B
Queue Length 50th (ft)		6			38			183				134
Queue Length 95th (ft)		39			146			#595				#799
Internal Link Dist (ft)		280			722			2510				627
Turn Bay Length (ft)												
Base Capacity (vph)		655			640			1403				1029
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		0.05			0.27			0.45				0.80

Intersection Summary

Area Type: Other  
 Cycle Length: 115.6  
 Actuated Cycle Length: 67.3  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.83  
 Intersection Signal Delay: 24.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 95.0%  
 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.

Splits and Phases: 10: W Avon Rd (RT 167) & Sycamore Hills Rd/Scoville Rd



Lane Group	Ø3
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	1
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	

Farmington Connectivity Study  
 11: Harris Rd/W Avon Rd (RT 167) & W Avon Rd (RT167)

2050 Scenario 4 (Route 177 & Build) Conditions

PM Peak



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	198	62	96	318	373	340
Future Volume (vph)	198	62	96	318	373	340
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	0.968			0.936		
Flt Protected	0.963			0.989		
Satd. Flow (prot)	1771	0	0	1879	1778	0
Flt Permitted	0.963			0.989		
Satd. Flow (perm)	1771	0	0	1879	1778	0
Link Speed (mph)	40			30	40	
Link Distance (ft)	781			809	2590	
Travel Time (s)	13.3			18.4	44.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	215	67	104	346	405	370
Shared Lane Traffic (%)						
Lane Group Flow (vph)	282	0	0	450	775	0
Sign Control	Stop			Stop	Stop	

Intersection Summary

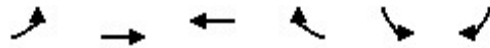
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	87.2%
ICU Level of Service	E
Analysis Period (min)	15

Intersection	
Intersection Delay, s/veh	66.9
Intersection LOS	F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑	↑	
Traffic Vol, veh/h	198	62	96	318	373	340
Future Vol, veh/h	198	62	96	318	373	340
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	215	67	104	346	405	370
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	17.4	24.2	109.7
HCM LOS	C	C	F

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	23%	76%	0%
Vol Thru, %	77%	0%	52%
Vol Right, %	0%	24%	48%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	414	260	713
LT Vol	96	198	0
Through Vol	318	0	373
RT Vol	0	62	340
Lane Flow Rate	450	283	775
Geometry Grp	1	1	1
Degree of Util (X)	0.731	0.519	1.163
Departure Headway (Hd)	6.197	7.027	5.403
Convergence, Y/N	Yes	Yes	Yes
Cap	589	517	674
Service Time	4.197	5.027	3.403
HCM Lane V/C Ratio	0.764	0.547	1.15
HCM Control Delay	24.2	17.4	109.7
HCM Lane LOS	C	C	F
HCM 95th-tile Q	6.2	3	25.1



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	166	115	198	61	32	174
Future Volume (vph)	166	115	198	61	32	174
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			0.968		0.886	
Flt Protected		0.971			0.992	
Satd. Flow (prot)	0	1845	1839	0	1670	0
Flt Permitted		0.971			0.992	
Satd. Flow (perm)	0	1845	1839	0	1670	0
Link Speed (mph)		30	30		25	
Link Distance (ft)		546	304		789	
Travel Time (s)		12.4	6.9		21.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	184	128	220	68	36	193
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	312	288	0	229	0
Sign Control		Free	Free		Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	51.9%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	5.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	166	115	198	61	32	174
Future Vol, veh/h	166	115	198	61	32	174
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	184	128	220	68	36	193

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	288	0	-	0	750
Stage 1	-	-	-	-	254
Stage 2	-	-	-	-	496
Critical Hdwy	4.1	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	1286	-	-	-	382
Stage 1	-	-	-	-	793
Stage 2	-	-	-	-	616
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1286	-	-	-	323
Mov Cap-2 Maneuver	-	-	-	-	323
Stage 1	-	-	-	-	671
Stage 2	-	-	-	-	616

Approach	EB	WB	SB
HCM Control Delay, s	4.9	0	13.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1286	-	-	-	645
HCM Lane V/C Ratio	0.143	-	-	-	0.355
HCM Control Delay (s)	8.3	0	-	-	13.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.5	-	-	-	1.6

Farmington Connectivity Study  
13: Stafford Ave & Stevens St

2050 Scenario 4 (Route 177 & Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	47	181	63	62	332	35	151	276	64	25	215	58
Future Volume (vph)	47	181	63	62	332	35	151	276	64	25	215	58
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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			1.00	
Frt		0.971			0.989			0.982			0.974	
Flt Protected		0.992			0.993			0.985			0.996	
Satd. Flow (prot)	0	1830	0	0	1866	0	0	1838	0	0	1835	0
Flt Permitted		0.879			0.917			0.657			0.933	
Satd. Flow (perm)	0	1622	0	0	1723	0	0	1226	0	0	1719	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		543			653			565			383	
Travel Time (s)		12.3			14.8			12.8			8.7	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	48	185	64	63	339	36	154	282	65	26	219	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	297	0	0	438	0	0	501	0	0	304	0
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	81		20	81		20	116		20	106	
Trailing Detector (ft)	0	75		0	75		0	110		0	100	
Detector 1 Position(ft)	0	75		0	75		0	110		0	100	
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	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Detector Phase	2	2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	19.0	19.0		19.0	19.0		19.0	19.0		19.0	19.0	
Total Split (s)	34.0	34.0		34.0	34.0		29.0	29.0		29.0	29.0	
Total Split (%)	41.5%	41.5%		41.5%	41.5%		35.4%	35.4%		35.4%	35.4%	
Maximum Green (s)	30.0	30.0		30.0	30.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	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			4.0			4.0	
Lead/Lag							Lag	Lag		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	19.0
Total Split (s)	19.0
Total Split (%)	23%
Maximum Green (s)	17.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes

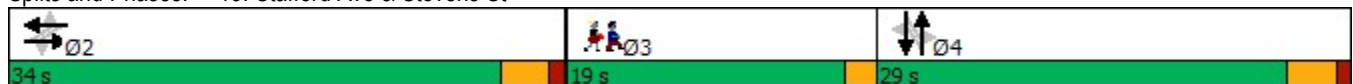


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicle Extension (s)	5.0	5.0		5.0	5.0		2.0	2.0		2.0	2.0	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	30.0				30.0		25.0				25.0	
Actuated g/C Ratio	0.37				0.37		0.30				0.30	
v/c Ratio	0.50				0.70		1.34				0.58	
Control Delay	23.8				29.1		199.0				29.4	
Queue Delay	0.0				0.0		0.0				0.0	
Total Delay	23.8				29.1		199.0				29.4	
LOS	C				C		F				C	
Approach Delay	23.8				29.1		199.0				29.4	
Approach LOS	C				C		F				C	
Queue Length 50th (ft)	116				188		~341				131	
Queue Length 95th (ft)	191				293		#525				213	
Internal Link Dist (ft)	463				573		485				303	
Turn Bay Length (ft)												
Base Capacity (vph)	593				630		373				524	
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	0.50				0.70		1.34				0.58	

Intersection Summary

Area Type:	Other
Cycle Length:	82
Actuated Cycle Length:	82
Natural Cycle:	90
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.34
Intersection Signal Delay:	83.4
Intersection LOS:	F
Intersection Capacity Utilization:	82.9%
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.	

Splits and Phases: 13: Stafford Ave & Stevens St























Lane Group	Ø3
Vehicle Extension (s)	3.0
Recall Mode	Ped
Walk Time (s)	7.0
Flash Dont Walk (s)	10.0
Pedestrian Calls (#/hr)	1
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

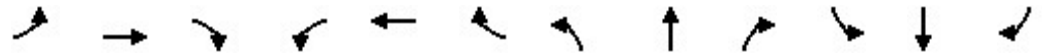
Farmington Connectivity Study  
 14: S Main St (RT 177) & Mill St

2050 Scenario 4 (Route 177 & Build) Conditions

PM Peak

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	28	0	0	50	39	0	0	0	121	0	0
Future Volume (vph)	0	28	0	0	50	39	0	0	0	121	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		95	0		100	60		0	0		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
Frt						0.850						
Flt Protected										0.950		
Satd. Flow (prot)	0	1881	1881	0	1881	1599	1881	1881	0	1787	1881	0
Flt Permitted										0.757		
Satd. Flow (perm)	0	1881	1881	0	1881	1599	1881	1881	0	1424	1881	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			30			25				25
Link Distance (ft)		906			356			584				461
Travel Time (s)		24.7			8.1			15.9				12.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	0	31	0	0	56	43	0	0	0	134	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	31	0	0	56	43	0	0	0	134	0	0
Number of Detectors	1	1	1	1	1	1	1	0		0	0	
Detector Template	Left			Left								
Leading Detector (ft)	20	50	50	20	40	40	50	0		0	0	
Trailing Detector (ft)	0	0	0	0	-10	-10	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	-10	-10	0	0		0	0	
Detector 1 Size(ft)	20	50	50	20	50	50	50	6		20	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	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		NA	pm+ov		NA	Prot	D,P+P			Perm		
Protected Phases		4	2		4	4	2	1 2				1
Permitted Phases	4		4	4			1			1		
Detector Phase	4	4	2	4	4	4	2	2		1	1	
Switch Phase												
Minimum Initial (s)	6.0	6.0	5.0	6.0	6.0	6.0	5.0			25.0	25.0	
Minimum Split (s)	10.3	10.3	9.6	10.3	10.3	10.3	9.6			29.6	29.6	
Total Split (s)	24.0	24.0	11.5	24.0	24.0	24.0	11.5			51.0	51.0	
Total Split (%)	21.5%	21.5%	10.3%	21.5%	21.5%	21.5%	10.3%			45.7%	45.7%	
Maximum Green (s)	19.7	19.7	6.9	19.7	19.7	19.7	6.9			46.4	46.4	
Yellow Time (s)	3.2	3.2	3.6	3.2	3.2	3.2	3.6			3.6	3.6	
All-Red Time (s)	1.1	1.1	1.0	1.1	1.1	1.1	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)		4.3	4.6		4.3	4.3	4.6			4.6	4.6	
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag			Lead	Lead	

Lane Group	Ø3
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)	
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)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	25.0
Total Split (s)	25.0
Total Split (%)	22%
Maximum Green (s)	21.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead

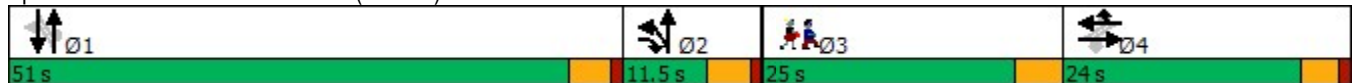


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5			3.0	3.0	
Recall Mode	None	None	None	None	None	None	None			Max	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	6.4			6.4			6.4			50.2		
Actuated g/C Ratio	0.10			0.10			0.10			0.80		
v/c Ratio	0.16			0.29			0.26			0.12		
Control Delay	27.2			29.7			29.7			2.4		
Queue Delay	0.0			0.0			0.0			0.0		
Total Delay	27.2			29.7			29.7			2.4		
LOS	C			C			C			A		
Approach Delay	27.2			29.7						2.4		
Approach LOS	C			C						A		
Queue Length 50th (ft)	11			20			15			9		
Queue Length 95th (ft)	32			49			42			22		
Internal Link Dist (ft)	826			276			504			381		
Turn Bay Length (ft)							100					
Base Capacity (vph)	591			591			502			1139		
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	0.05			0.09			0.09			0.12		

Intersection Summary

Area Type: Other  
 Cycle Length: 111.5  
 Actuated Cycle Length: 62.7  
 Natural Cycle: 75  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.29  
 Intersection Signal Delay: 15.5  
 Intersection LOS: B  
 Intersection Capacity Utilization 33.3%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 14: S Main St (RT 177) & Mill St

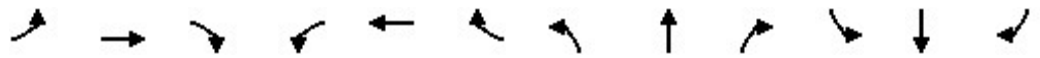


Lane Group	Ø3
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	14.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
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	

Farmington Connectivity Study  
 15: S Main St (RT 177) & Railroad Ave/New Britain Ave

2050 Scenario 4 (Route 177 & Build) Conditions

PM Peak



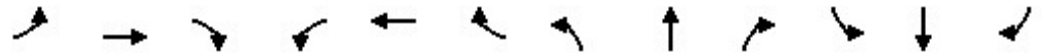
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (vph)	0	0	53	200	1	0	19	0	50	0	0	0
Future Volume (vph)	0	0	53	200	1	0	19	0	50	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		200	80		0	120		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			80			50		
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		0.97			0.99		0.99					
Frt		0.865						0.850				
Flt Protected					0.953		0.950					
Satd. Flow (prot)	0	1586	0	0	1793	1881	1787	1599	0	1881	1881	0
Flt Permitted					0.684		0.757					
Satd. Flow (perm)	0	1586	0	0	1280	1881	1415	1599	0	1881	1881	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		25			30			25				25
Link Distance (ft)		579			590			1222				584
Travel Time (s)		15.8			13.4			33.3				15.9
Confl. Peds. (#/hr)			5	5			3					3
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	0	0	58	220	1	0	21	0	55	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	58	0	0	221	0	21	55	0	0	0	0
Number of Detectors	1	1		1	1	1	0	2		1	2	
Detector Template	Left			Left								
Leading Detector (ft)	20	40		20	40	40	0	206		50	206	
Trailing Detector (ft)	0	-10		0	-10	-10	0	100		0	100	
Detector 1 Position(ft)	0	-10		0	-10	-10	0	100		0	100	
Detector 1 Size(ft)	20	50		20	50	50	20	6		50	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)								200				200
Detector 2 Size(ft)								6				6
Detector 2 Type								Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)								0.0				0.0
Turn Type		NA		Perm	NA	pt+ov	Perm	NA		D.P+P		
Protected Phases		4			4	2 4		1		2	1 2	
Permitted Phases	4			4			1			1		
Detector Phase	4	4		4	4	4	1	1		2	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		25.0	25.0		5.0		
Minimum Split (s)	10.2	10.2		10.2	10.2		29.6	29.6		9.6		
Total Split (s)	62.0	62.0		62.0	62.0		35.0	35.0		11.4		

Lane Group	Ø3
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)	
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	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	23.0
Total Split (s)	23.0

Farmington Connectivity Study  
 15: S Main St (RT 177) & Railroad Ave/New Britain Ave

2050 Scenario 4 (Route 177 & Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	47.2%	47.2%		47.2%	47.2%		26.6%	26.6%		8.7%		
Maximum Green (s)	57.8	57.8		57.8	57.8		30.4	30.4		6.8		
Yellow Time (s)	3.2	3.2		3.2	3.2		3.6	3.6		3.6		
All-Red Time (s)	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		
Total Lost Time (s)		4.2			4.2		4.6	4.6		4.6		
Lead/Lag	Lag	Lag		Lag	Lag		Lead	Lead		Lag		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes		
Vehicle Extension (s)	1.5	1.5		1.5	1.5		2.5	2.5		1.5		
Recall Mode	None	None		None	None		Min	Min		None		
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		13.1			13.1		26.5	26.5				
Actuated g/C Ratio		0.25			0.25		0.51	0.51				
v/c Ratio		0.14			0.68		0.03	0.07				
Control Delay		17.3			30.3		12.6	11.9				
Queue Delay		0.0			0.0		0.0	0.0				
Total Delay		17.3			30.3		12.6	11.9				
LOS		B			C		B	B				
Approach Delay		17.3			30.3			12.1				
Approach LOS		B			C			B				
Queue Length 50th (ft)		12			52		2	6				
Queue Length 95th (ft)		49			167		23	46				
Internal Link Dist (ft)		499			510			1142			504	
Turn Bay Length (ft)							80					
Base Capacity (vph)		1495			1207		877	991				
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		0.04			0.18		0.02	0.06				

Intersection Summary

Area Type: Other  
 Cycle Length: 131.4  
 Actuated Cycle Length: 51.9  
 Natural Cycle: 80  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.68  
 Intersection Signal Delay: 24.3  
 Intersection Capacity Utilization 46.0%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service A

Splits and Phases: 15: S Main St (RT 177) & Railroad Ave/New Britain Ave



Lane Group	Ø3
Total Split (%)	18%
Maximum Green (s)	19.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	11
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	149	154	222	578	3
Future Volume (vph)	1	149	154	222	578	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.866			0.999		
Flt Protected				0.980		
Satd. Flow (prot)	1629	0	0	1844	1879	0
Flt Permitted				0.980		
Satd. Flow (perm)	1629	0	0	1844	1879	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	805			584	1222	
Travel Time (s)	22.0			15.9	33.3	
Confl. Peds. (#/hr)				2		2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	1	155	160	231	602	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	156	0	0	391	605	0
Sign Control	Stop			Free	Free	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	70.1%
ICU Level of Service	C
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	1	149	154	222	578	3
Future Vol, veh/h	1	149	154	222	578	3
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	1	155	160	231	602	3

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1157	606	607	0	-	0
Stage 1	606	-	-	-	-	-
Stage 2	551	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.11	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.209	-	-	-
Pot Cap-1 Maneuver	218	499	976	-	-	-
Stage 1	546	-	-	-	-	-
Stage 2	579	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	176	498	974	-	-	-
Mov Cap-2 Maneuver	176	-	-	-	-	-
Stage 1	442	-	-	-	-	-
Stage 2	578	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.7	3.9	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	974	-	492	-	-
HCM Lane V/C Ratio	0.165	-	0.318	-	-
HCM Control Delay (s)	9.4	0	15.7	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.6	-	1.4	-	-

Farmington Connectivity Study  
17: Plainville Ave (RT 177) & Coopermine Rd

2050 Scenario 4 (Route 177 & Build) Conditions

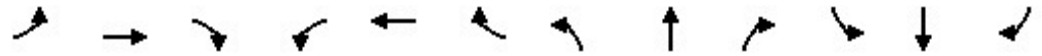
PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	82	66	26	67	124	46	93	676	102	35	463	131
Future Volume (vph)	82	66	26	67	124	46	93	676	102	35	463	131
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	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.980			0.974			0.984			0.972	
Fl <sub>t</sub> Protected		0.977			0.986			0.995			0.997	
Satd. Flow (prot)	0	1801	0	0	1807	0	0	1842	0	0	1823	0
Fl <sub>t</sub> Permitted		0.613			0.825			0.866			0.922	
Satd. Flow (perm)	0	1130	0	0	1512	0	0	1603	0	0	1686	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			12			10			20	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		498			472			529			491	
Travel Time (s)		9.7			9.2			10.3			9.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	85	68	27	69	128	47	96	697	105	36	477	135
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	180	0	0	244	0	0	898	0	0	648	0
Number of Detectors	1	3		1	3		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	24		20	24		20	361		20	361	
Trailing Detector (ft)	0	-10		0	-10		0	185		0	185	
Detector 1 Position(ft)	0	-10		0	-10		0	185		0	185	
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)		6			6			355			355	
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	
Detector 3 Position(ft)		18			18							
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	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0		15.0	15.0	
Minimum Split (s)	20.5	20.5		20.5	20.5		21.9	21.9		21.9	21.9	
Total Split (s)	40.5	40.5		40.5	40.5		66.9	66.9		66.9	66.9	

Farmington Connectivity Study  
 17: Plainville Ave (RT 177) & Coopermine Rd

2050 Scenario 4 (Route 177 & Build) Conditions  
 PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	37.7%	37.7%		37.7%	37.7%		62.3%	62.3%		62.3%	62.3%	
Maximum Green (s)	35.0	35.0		35.0	35.0		60.0	60.0		60.0	60.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		4.4	4.4		4.4	4.4	
All-Red Time (s)	2.2	2.2		2.2	2.2		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.5			5.5			6.9			6.9	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.5	1.5		1.5	1.5		5.0	5.0		5.0	5.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	14.0	14.0		14.0	14.0							
Flash Dont Walk (s)	1.0	1.0		1.0	1.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		17.2			17.2			60.2			60.2	
Actuated g/C Ratio		0.19			0.19			0.67			0.67	
v/c Ratio		0.81			0.82			0.83			0.57	
Control Delay		59.2			54.6			21.3			11.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		59.2			54.6			21.3			11.1	
LOS		E			D			C			B	
Approach Delay		59.2			54.6			21.3			11.1	
Approach LOS		E			D			C			B	
Queue Length 50th (ft)		93			127			329			165	
Queue Length 95th (ft)		168			210			#760			336	
Internal Link Dist (ft)		418			392			449			411	
Turn Bay Length (ft)												
Base Capacity (vph)		447			598			1077			1136	
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			0.41			0.83			0.57	

Intersection Summary

Area Type: Other  
 Cycle Length: 107.4  
 Actuated Cycle Length: 89.8  
 Natural Cycle: 75  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.83  
 Intersection Signal Delay: 25.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 99.9%  
 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.

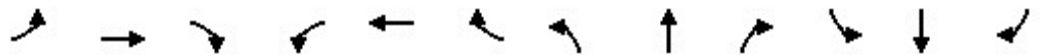
Splits and Phases: 17: Plainville Ave (RT 177) & Coopermine Rd



Farmington Connectivity Study  
 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd

2050 Scenario 4 (Route 177 & Build) Conditions

PM Peak

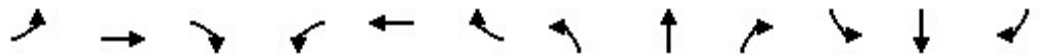


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (vph)	19	103	167	64	213	91	301	886	41	56	547	28
Future Volume (vph)	19	103	167	64	213	91	301	886	41	56	547	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	250		0	80		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			100			40		
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		0.922			0.967			0.993			0.993	
Flt Protected		0.997			0.991		0.950			0.950		
Satd. Flow (prot)	0	1729	0	0	1803	0	1787	1868	0	1787	1868	0
Flt Permitted		0.959			0.805		0.227			0.083		
Satd. Flow (perm)	0	1663	0	0	1464	0	427	1868	0	156	1868	0
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)					13			3				3
Link Speed (mph)		30			30			45				45
Link Distance (ft)		594			761			713				527
Travel Time (s)		13.5			17.3			10.8				8.0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	19	105	170	65	217	93	307	904	42	57	558	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	294	0	0	375	0	307	946	0	57	587	0
Number of Detectors	1	3		1	2		3	1		3	1	
Detector Template	Left			Left								
Leading Detector (ft)	20	18		20	12		24	356		24	206	
Trailing Detector (ft)	0	-10		0	-6		-6	350		-6	200	
Detector 1 Position(ft)	0	-10		0	-6		-6	350		-6	200	
Detector 1 Size(ft)	20	6		20	6		6	6		6	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)		0			6		6			6		
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		
Detector 3 Position(ft)		12					18			18		
Detector 3 Size(ft)		6					6			6		
Detector 3 Type		Cl+Ex					Cl+Ex			Cl+Ex		
Detector 3 Channel												
Detector 3 Extend (s)		0.0					0.0			0.0		
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4			2			6		
Detector Phase	4	4		4	4		5	2		1	6	
Switch Phase												

Farmington Connectivity Study  
 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd

2050 Scenario 4 (Route 177 & Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	7.0	7.0		7.0	7.0		3.0	30.0		3.0	30.0	
Minimum Split (s)	30.9	30.9		30.9	30.9		7.0	37.1		7.0	37.1	
Total Split (s)	34.9	34.9		34.9	34.9		19.0	67.1		12.0	67.1	
Total Split (%)	28.8%	28.8%		28.8%	28.8%		15.7%	55.5%		9.9%	55.5%	
Maximum Green (s)	30.0	30.0		30.0	30.0		15.0	60.0		8.0	60.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.0	4.4		3.0	4.4	
All-Red Time (s)	1.6	1.6		1.6	1.6		1.0	2.7		1.0	2.7	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.9			4.9		4.0	7.1		4.0	7.1	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	6.0		2.0	6.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)	25.0	25.0		25.0	25.0							
Flash Dont Walk (s)	1.0	1.0		1.0	1.0							
Pedestrian Calls (#/hr)	0	0		0	0							
Act Effct Green (s)		30.3			30.3		67.2	56.3		56.2	47.3	
Actuated g/C Ratio		0.28			0.28		0.63	0.53		0.53	0.44	
v/c Ratio		0.62			0.88		0.71	0.96		0.33	0.71	
Control Delay		41.9			60.3		18.3	45.0		13.7	29.1	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		41.9			60.3		18.3	45.0		13.7	29.1	
LOS		D			E		B	D		B	C	
Approach Delay		41.9			60.3			38.4			27.8	
Approach LOS		D			E			D			C	
Queue Length 50th (ft)		188			256		85	608		13	311	
Queue Length 95th (ft)		290			#452		127	#930		28	456	
Internal Link Dist (ft)		514			681			633			447	
Turn Bay Length (ft)							250			80		
Base Capacity (vph)		473			425		462	1188		209	1064	
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		0.62			0.88		0.66	0.80		0.27	0.55	

Intersection Summary

Area Type: Other  
 Cycle Length: 121  
 Actuated Cycle Length: 106.5  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.96  
 Intersection Signal Delay: 39.4  
 Intersection LOS: D  
 Intersection Capacity Utilization 103.7%  
 ICU Level of Service G  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

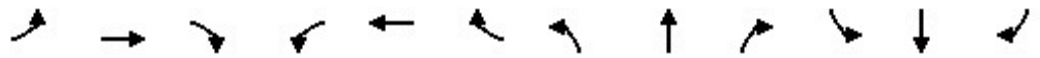
Splits and Phases: 18: Plainville Ave (RT 177) & Morea Rd/Meadow Rd



Farmington Connectivity Study  
 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)

2050 Scenario 4 (Route 177 & Build) Conditions

PM Peak



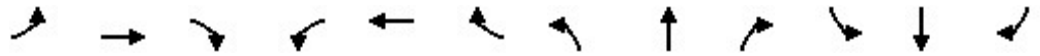
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	143	426	130	169	751	286	139	823	98	175	551	134
Future Volume (vph)	143	426	130	169	751	286	139	823	98	175	551	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260		260	180		0	250		250	165		165
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (ft)	190			170			150			115		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor				1.00						1.00		
Frt			0.850		0.959				0.850		0.971	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1881	1599	1787	3428	0	1787	1881	1599	1787	3471	0
Flt Permitted	0.950			0.950			0.224			0.088		
Satd. Flow (perm)	1787	1881	1599	1782	3428	0	421	1881	1599	166	3471	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			120		31				65			16
Link Speed (mph)		45			45			40				45
Link Distance (ft)		780			1567			643				474
Travel Time (s)		11.8			23.7			11.0				7.2
Confl. Peds. (#/hr)			2	2					1	1		
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	146	435	133	172	766	292	142	840	100	179	562	137
Shared Lane Traffic (%)												
Lane Group Flow (vph)	146	435	133	172	1058	0	142	840	100	179	699	0
Number of Detectors	3	2	2	3	2		3	3	3	3	3	
Detector Template												
Leading Detector (ft)	24	306	306	24	306		24	24	24	24	24	
Trailing Detector (ft)	-6	150	150	-6	150		-6	-6	-6	-6	-6	
Detector 1 Position(ft)	-6	150	150	-6	150		-6	-6	-6	-6	-6	
Detector 1 Size(ft)	6	6	6	6	6		6	6	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	6	300	300	6	300		6	6	6	6	6	
Detector 2 Size(ft)	6	6	6	6	6		6	6	6	6	6	
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 3 Position(ft)	18			18			18	18	18	18	18	
Detector 3 Size(ft)	6			6			6	6	6	6	6	
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0	0.0	0.0	0.0	
Turn Type	Prot	NA	Prot	Prot	NA		pm+pt	NA	pt+ov	pm+pt	NA	
Protected Phases	1	6	6	5	2		3	8	5 8	7	4	
Permitted Phases							8			4		

Lane Group	Ø9
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)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	

Farmington Connectivity Study  
 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)

2050 Scenario 4 (Route 177 & Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6	6	5	2		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0		5.0	9.0		5.0	9.0	
Minimum Split (s)	9.0	20.2	20.2	9.0	20.2		9.0	14.7		9.0	14.7	
Total Split (s)	25.0	35.2	35.2	25.0	45.2		22.0	50.7		14.0	45.7	
Total Split (%)	14.7%	20.7%	20.7%	14.7%	26.6%		12.9%	29.8%		8.2%	26.9%	
Maximum Green (s)	21.0	30.0	30.0	21.0	40.0		18.0	45.0		10.0	40.0	
Yellow Time (s)	3.0	4.2	4.2	3.0	4.2		3.0	4.5		3.0	4.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.2		1.0	1.2	
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)	4.0	5.2	5.2	4.0	5.2		4.0	5.7		4.0	5.7	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	2.5	2.5	1.5	2.5		2.0	3.0		2.0	2.0	
Recall Mode	None	Min	Min	None	Min		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	14.5	38.5	38.5	16.6	40.6		58.3	46.1	67.9	57.0	45.2	
Actuated g/C Ratio	0.11	0.28	0.28	0.12	0.30		0.43	0.34	0.50	0.42	0.33	
v/c Ratio	0.76	0.82	0.25	0.79	1.01		0.49	1.31	0.12	0.94	0.60	
Control Delay	85.8	59.8	10.6	83.5	75.9		30.5	188.8	6.6	84.2	42.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	85.8	59.8	10.6	83.5	75.9		30.5	188.8	6.6	84.2	42.2	
LOS	F	E	B	F	E		C	F	A	F	D	
Approach Delay		56.0			76.9			151.2			50.7	
Approach LOS		E			E			F			D	
Queue Length 50th (ft)	119	333	8	139	446		66	~881	14	96	242	
Queue Length 95th (ft)	240	#721	71	#308	#910		165	#1584	39	#368	467	
Internal Link Dist (ft)		700			1487			563			394	
Turn Bay Length (ft)	260		260	180			250		250	165		
Base Capacity (vph)	280	562	562	280	1047		376	675	822	191	1166	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.52	0.77	0.24	0.61	1.01		0.38	1.24	0.12	0.94	0.60	










Intersection Summary

Area Type: Other  
 Cycle Length: 169.9  
 Actuated Cycle Length: 135.6  
 Natural Cycle: 145  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.31  
 Intersection Signal Delay: 87.8  
 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.

Lane Group	Ø9
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	32.0
Total Split (s)	32.0
Total Split (%)	19%
Maximum Green (s)	28.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
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)	21.0
Pedestrian Calls (#/hr)	4
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	
<b>Intersection Summary</b>	

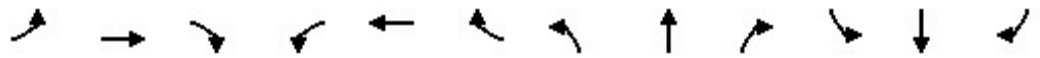
# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 19: Plainville Ave (RT 177) & Scott Swamp Rd (US 6)

 Ø1	 Ø2	 Ø3	 Ø4	 Ø9
25 s	45.2 s	22 s	45.7 s	32 s
 Ø5	 Ø6	 Ø7	 Ø8	
25 s	35.2 s	14 s	50.7 s	

Farmington Connectivity Study  
 20: Unionville Ave (RT 177) & Northwest Dr

2050 Scenario 4 (Route 177 & Build) Conditions  
 PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	107	99	268	247	151	127	937	84	87	564	14
Future Volume (vph)	27	107	99	268	247	151	127	937	84	87	564	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	210		0	260		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			75			75		
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		0.928			0.943			0.988			0.996	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1729	0	1770	1757	0	1770	3497	0	1770	3523	0
Flt Permitted	0.479			0.398			0.264			0.161		
Satd. Flow (perm)	892	1729	0	741	1757	0	491	3497	0	300	3523	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			22			6			2	
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		710			592			572			675	
Travel Time (s)		13.8			11.5			9.8			11.5	
Confl. Peds. (#/hr)							1					1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	28	111	103	279	257	157	132	976	88	91	588	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	28	214	0	279	414	0	132	1064	0	91	603	0
Number of Detectors	3	3		3	3		3	2		3	2	
Detector Template												
Leading Detector (ft)	24	24		24	24		24	331		24	331	
Trailing Detector (ft)	-6	-6		-6	-6		-6	150		-6	150	
Detector 1 Position(ft)	-6	-6		-6	-6		-6	150		-6	150	
Detector 1 Size(ft)	6	6		6	6		6	6		6	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)	6	6		6	6		6	325		6	325	
Detector 2 Size(ft)	6	6		6	6		6	6		6	6	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 3 Position(ft)	18	18		18	18		18			18		
Detector 3 Size(ft)	6	6		6	6		6			6		
Detector 3 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex			Cl+Ex		
Detector 3 Channel												
Detector 3 Extend (s)	0.0	0.0		0.0	0.0		0.0			0.0		
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		3	8		1	6		5	2	

Lane Group	Ø9
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	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
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)	
Detector 3 Position(ft)	
Detector 3 Size(ft)	
Detector 3 Type	
Detector 3 Channel	
Detector 3 Extend (s)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
<b>Switch Phase</b>												
Minimum Initial (s)	4.0	9.0		4.0	9.0		4.0	15.0		4.0	15.0	
Minimum Split (s)	8.0	15.2		8.0	15.2		8.0	22.5		8.0	22.5	
Total Split (s)	14.0	23.2		26.0	35.2		16.0	32.5		12.0	28.5	
Total Split (%)	10.9%	18.0%		20.2%	27.4%		12.4%	25.3%		9.3%	22.1%	
Maximum Green (s)	10.0	17.0		22.0	29.0		12.0	25.0		8.0	21.0	
Yellow Time (s)	3.0	4.1		3.0	4.1		3.0	4.8		3.0	4.8	
All-Red Time (s)	1.0	2.1		1.0	2.1		1.0	2.7		1.0	2.7	
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	6.2		4.0	6.2		4.0	7.5		4.0	7.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	3.0		1.5	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
<b>Walk Time (s)</b>												
<b>Flash Dont Walk (s)</b>												
<b>Pedestrian Calls (#/hr)</b>												
Act Effct Green (s)	24.0	15.9		36.6	30.7		38.1	27.5		34.3	23.8	
Actuated g/C Ratio	0.27	0.18		0.41	0.34		0.42	0.31		0.38	0.27	
v/c Ratio	0.10	0.65		0.60	0.67		0.40	0.99		0.40	0.64	
Control Delay	21.7	42.6		27.0	33.9		23.7	59.7		26.0	36.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	21.7	42.6		27.0	33.9		23.7	59.7		26.0	36.2	
LOS	C	D		C	C		C	E		C	D	
Approach Delay		40.2			31.1			55.7			34.9	
Approach LOS		D			C			E			C	
Queue Length 50th (ft)	8	88		96	155		37	~294		25	141	
Queue Length 95th (ft)	37	#290		263	#525		135	#799		98	#408	
Internal Link Dist (ft)		630			512			492			595	
Turn Bay Length (ft)							210			260		
Base Capacity (vph)	386	374		565	631		396	1073		256	935	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.07	0.57		0.49	0.66		0.33	0.99		0.36	0.64	

**Intersection Summary**

Area Type: Other  
 Cycle Length: 128.7  
 Actuated Cycle Length: 89.8  
 Natural Cycle: 130  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.99  
 Intersection Signal Delay: 43.2  
 Intersection Capacity Utilization 78.0%  
 Analysis Period (min) 15  
 Intersection LOS: D  
 ICU Level of Service D

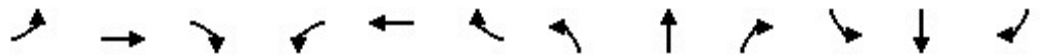
~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.

Lane Group	Ø9
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	35.0
Total Split (s)	35.0
Total Split (%)	27%
Maximum Green (s)	31.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
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)	24.0
Pedestrian Calls (#/hr)	1
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
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	

Queue shown is maximum after two cycles.

Splits and Phases: 20: Unionville Ave (RT 177) & Northwest Dr

↙ Ø1	↓ Ø2	↙ Ø3	→ Ø4	🚶 Ø9
16 s	28.5 s	26 s	23.2 s	35 s
↙ Ø5	↑ Ø6	↙ Ø7	← Ø8	
12 s	32.5 s	14 s	35.2 s	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	14	139	51	22	209	157	152	234	18	200	149	9
Future Volume (vph)	14	139	51	22	209	157	152	234	18	200	149	9
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	1.00	1.00	1.00	1.00	1.00
Frt		0.966			0.945			0.994			0.996	
Flt Protected		0.997			0.997			0.982			0.973	
Satd. Flow (prot)	0	1794	0	0	1755	0	0	1818	0	0	1805	0
Flt Permitted		0.997			0.997			0.982			0.973	
Satd. Flow (perm)	0	1794	0	0	1755	0	0	1818	0	0	1805	0
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		506			528			2775			437	
Travel Time (s)		9.9			10.3			63.1			9.9	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	15	148	54	23	222	167	162	249	19	213	159	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	217	0	0	412	0	0	430	0	0	382	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	64.0%
ICU Level of Service	B
Analysis Period (min)	15

Intersection	
Intersection Delay, s/veh	51.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	139	51	22	209	157	152	234	18	200	149	9
Future Vol, veh/h	14	139	51	22	209	157	152	234	18	200	149	9
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	148	54	23	222	167	162	249	19	213	159	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	22.4	53.3	65.5	49.1
HCM LOS	C	F	F	E

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	38%	7%	6%	56%
Vol Thru, %	58%	68%	54%	42%
Vol Right, %	4%	25%	40%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	404	204	388	358
LT Vol	152	14	22	200
Through Vol	234	139	209	149
RT Vol	18	51	157	9
Lane Flow Rate	430	217	413	381
Geometry Grp	1	1	1	1
Degree of Util (X)	0.973	0.543	0.918	0.885
Departure Headway (Hd)	8.151	9.01	8.009	8.369
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	443	399	450	430
Service Time	6.228	7.105	6.082	6.45
HCM Lane V/C Ratio	0.971	0.544	0.918	0.886
HCM Control Delay	65.5	22.4	53.3	49.1
HCM Lane LOS	F	C	F	E
HCM 95th-tile Q	11.9	3.1	10.3	9.2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	116	100	74	6	125	9	167	338	9	2	138	69
Future Volume (vph)	116	100	74	6	125	9	167	338	9	2	138	69
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	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.966			0.991			0.998			0.955	
Flt Protected		0.980			0.998			0.984				
Satd. Flow (prot)	0	1763	0	0	1842	0	0	1829	0	0	1779	0
Flt Permitted		0.980			0.998			0.984				
Satd. Flow (perm)	0	1763	0	0	1842	0	0	1829	0	0	1779	0
Link Speed (mph)		30			35			30			30	
Link Distance (ft)		414			396			469			2775	
Travel Time (s)		9.4			7.7			10.7			63.1	
Confl. Peds. (#/hr)			14	14			8		17	17		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)	126	109	80	7	136	10	182	367	10	2	150	75
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	315	0	0	153	0	0	559	0	0	227	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	77.1%
Analysis Period (min)	15
	ICU Level of Service D

Intersection	
Intersection Delay, s/veh	32.2
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	116	100	74	6	125	9	167	338	9	2	138	69
Future Vol, veh/h	116	100	74	6	125	9	167	338	9	2	138	69
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	2	2	2	2	2	2	2	2	2
Mvmt Flow	126	109	80	7	136	10	182	367	10	2	150	75
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

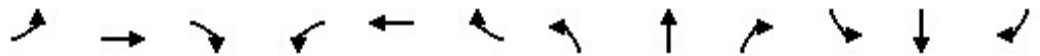
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	19.3	13.7	51.6	14.6
HCM LOS	C	B	F	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	32%	40%	4%	1%
Vol Thru, %	66%	34%	89%	66%
Vol Right, %	2%	26%	6%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	514	290	140	209
LT Vol	167	116	6	2
Through Vol	338	100	125	138
RT Vol	9	74	9	69
Lane Flow Rate	559	315	152	227
Geometry Grp	1	1	1	1
Degree of Util (X)	0.954	0.591	0.312	0.424
Departure Headway (Hd)	6.145	6.85	7.388	6.715
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	587	530	488	538
Service Time	4.228	4.85	5.402	4.715
HCM Lane V/C Ratio	0.952	0.594	0.311	0.422
HCM Control Delay	51.6	19.3	13.7	14.6
HCM Lane LOS	F	C	B	B
HCM 95th-tile Q	12.8	3.8	1.3	2.1

Farmington Connectivity Study  
 23: New Britain Ave & Scott Swamp Rd (US 6)

2050 Scenario 4 (Route 177 & Build) Conditions

PM Peak

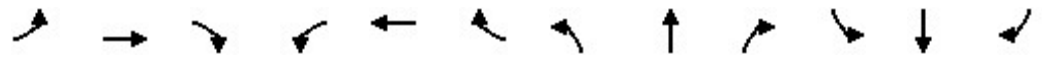


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	649	50	22	1056	317	32	124	12	114	142	41
Future Volume (vph)	48	649	50	22	1056	317	32	124	12	114	142	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	340		0	100		320	190		0	120		0
Storage Lanes	1		0	1		1	1		0	2		0
Taper Length (ft)	150			100			100			110		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.989				0.850		0.987			0.966	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3535	0	1787	3574	1599	1787	1857	0	3467	1817	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1787	3535	0	1787	3574	1599	1787	1857	0	3467	1817	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10				341		5			15	
Link Speed (mph)		45			45			25			35	
Link Distance (ft)		3978			920			676			631	
Travel Time (s)		60.3			13.9			18.4			12.3	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	52	698	54	24	1135	341	34	133	13	123	153	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	52	752	0	24	1135	341	34	146	0	123	197	0
Number of Detectors	3	0		3	0	0	3	3		3	3	
Detector Template												
Leading Detector (ft)	24	0		24	0	0	24	24		24	24	
Trailing Detector (ft)	-10	0		-10	0	0	-6	-6		-6	-6	
Detector 1 Position(ft)	-10	0		-10	0	0	-6	-6		-6	-6	
Detector 1 Size(ft)	6	6		6	6	20	6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
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)	6			6			6	6		6	6	
Detector 2 Size(ft)	6			6			6	6		6	6	
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0		0.0	0.0	
Detector 3 Position(ft)	18			18			18	18		18	18	
Detector 3 Size(ft)	6			6			6	6		6	6	
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0		0.0	0.0	
Turn Type	Prot	NA		Prot	NA	pt+ov	Split	NA		Split	NA	
Protected Phases	1	6		5	2	2 7	8	8		7	7	
Permitted Phases												
Detector Phase	1	6		5	2	2	8	8		7	7	
Switch Phase												

Farmington Connectivity Study  
 23: New Britain Ave & Scott Swamp Rd (US 6)

2050 Scenario 4 (Route 177 & Build) Conditions

PM Peak









Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0		7.0	7.0	
Minimum Split (s)	9.9	20.8		11.4	20.8		34.0	34.0		13.2	13.2	
Total Split (s)	15.0	28.0		15.0	28.0		18.0	18.0		19.0	19.0	
Total Split (%)	18.8%	35.0%		18.8%	35.0%		22.5%	22.5%		23.8%	23.8%	
Maximum Green (s)	10.1	22.2		8.6	22.2		12.0	12.0		12.8	12.8	
Yellow Time (s)	3.0	4.8		3.0	4.8		3.3	3.3		3.3	3.3	
All-Red Time (s)	1.9	1.0		3.4	1.0		2.7	2.7		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.9	5.8		6.4	5.8		6.0	6.0		6.2	6.2	
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)							27.0	27.0				
Flash Dont Walk (s)							1.0	1.0				
Pedestrian Calls (#/hr)							0	0				
Act Effct Green (s)	7.0	35.6		5.9	33.1	50.6	9.9	9.9		11.2	11.2	
Actuated g/C Ratio	0.09	0.44		0.07	0.41	0.63	0.12	0.12		0.14	0.14	
v/c Ratio	0.34	0.48		0.18	0.77	0.30	0.15	0.63		0.25	0.74	
Control Delay	39.5	19.3		38.1	25.3	6.5	31.8	44.0		31.3	47.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	39.5	19.3		38.1	25.3	6.5	31.8	44.0		31.3	47.2	
LOS	D	B		D	C	A	C	D		C	D	
Approach Delay		20.6			21.2			41.7			41.1	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	25	120		12	297	38	15	67		27	86	
Queue Length 95th (ft)	57	237		m22	#480	158	40	122		51	#168	
Internal Link Dist (ft)		3898			840			596			551	
Turn Bay Length (ft)	340			100		320	190			120		
Base Capacity (vph)	225	1579		192	1480	1136	268	282		554	303	
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	0.23	0.48		0.13	0.77	0.30	0.13	0.52		0.22	0.65	

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 55 (69%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 24.6      Intersection LOS: C  
 Intersection Capacity Utilization 66.6%      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.

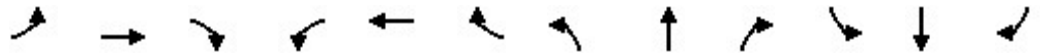
Splits and Phases: 23: New Britain Ave & Scott Swamp Rd (US 6)

 Ø1	 Ø2 (R)	 Ø7	 Ø8
15 s	28 s	19 s	18 s
 Ø5	 Ø6 (R)		
15 s	28 s		

Farmington Connectivity Study  
 24: Hyde Rd & Scott Swamp Rd (US 6)

2050 Scenario 4 (Route 177 & Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	841	25	176	1226	3	13	0	253	14	7	9
Future Volume (vph)	2	841	25	176	1226	3	13	0	253	14	7	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		0	360		0	0		0	0		0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	100			65			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996							0.850			0.850
Flt Protected	0.950			0.950				0.950			0.968	
Satd. Flow (prot)	1787	3560	0	1787	3574	0	0	1787	1599	0	1821	1599
Flt Permitted	0.950			0.950				0.909			0.795	
Satd. Flow (perm)	1787	3560	0	1787	3574	0	0	1710	1599	0	1496	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5							89			113
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		1090			523			762			370	
Travel Time (s)		16.5			7.9			20.8			10.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	2	924	27	193	1347	3	14	0	278	15	8	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	951	0	193	1350	0	0	14	278	0	23	10
Number of Detectors	3	0		3	0		1	3	3	1	3	3
Detector Template							Left			Left		
Leading Detector (ft)	24	0		24	0		20	24	24	20	24	24
Trailing Detector (ft)	-10	0		-10	0		0	-10	-10	0	-10	-10
Detector 1 Position(ft)	-10	0		-10	0		0	-10	-10	0	-10	-10
Detector 1 Size(ft)	6	6		6	6		20	6	6	20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	6			6			6	6	6		6	6
Detector 2 Size(ft)	6			6			6	6	6		6	6
Detector 2 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0	0.0	0.0		0.0	0.0
Detector 3 Position(ft)	18			18			18	18	18		18	18
Detector 3 Size(ft)	6			6			6	6	6		6	6
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0	0.0		0.0	0.0
Turn Type	Prot	NA		Prot	NA		Perm	NA	pm+ov	Perm	NA	Perm
Protected Phases	1	6		5	2			4	5		4	
Permitted Phases							4		4	4		4
Detector Phase	1	6		5	2		4	4	5	4	4	4
Switch Phase												

Farmington Connectivity Study  
 24: Hyde Rd & Scott Swamp Rd (US 6)

2050 Scenario 4 (Route 177 & Build) Conditions  
 PM Peak

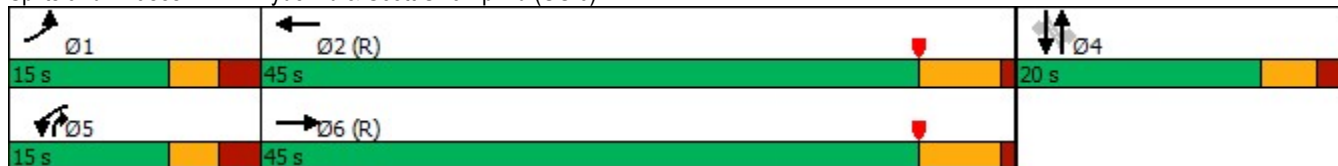


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	15.0		5.0	15.0		7.0	7.0	5.0	7.0	7.0	7.0
Minimum Split (s)	10.5	21.8		10.5	21.8		30.5	30.5	10.5	30.5	30.5	30.5
Total Split (s)	15.0	45.0		15.0	45.0		20.0	20.0	15.0	20.0	20.0	20.0
Total Split (%)	18.8%	56.3%		18.8%	56.3%		25.0%	25.0%	18.8%	25.0%	25.0%	25.0%
Maximum Green (s)	9.5	39.2		9.5	39.2		14.5	14.5	9.5	14.5	14.5	14.5
Yellow Time (s)	3.0	4.8		3.0	4.8		3.3	3.3	3.0	3.3	3.3	3.3
All-Red Time (s)	2.5	1.0		2.5	1.0		2.2	2.2	2.5	2.2	2.2	2.2
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)	5.5	5.8		5.5	5.8		5.5	5.5		5.5	5.5	5.5
Lead/Lag	Lead	Lag		Lead	Lag				Lead			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Vehicle Extension (s)	2.0	3.0		2.0	3.0		2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	None
Walk Time (s)		15.0			15.0		24.0	24.0		24.0	24.0	24.0
Flash Dont Walk (s)		1.0			1.0		1.0	1.0		1.0	1.0	1.0
Pedestrian Calls (#/hr)		0			0		0	0		0	0	0
Act Effct Green (s)	5.0	46.8		14.2	66.7			7.2	21.9		7.2	7.2
Actuated g/C Ratio	0.06	0.58		0.18	0.83		0.09	0.27		0.09	0.09	0.09
v/c Ratio	0.02	0.46		0.61	0.45		0.09	0.55		0.17	0.17	0.04
Control Delay	49.5	8.6		40.0	3.3		34.8	19.3		36.8	36.8	0.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	49.5	8.6		40.0	3.3		34.8	19.3		36.8	36.8	0.3
LOS	D	A		D	A		C	B		D	D	A
Approach Delay		8.7			7.9		20.0				25.8	
Approach LOS		A			A		C				C	
Queue Length 50th (ft)	1	201		83	65		7	70		11	11	0
Queue Length 95th (ft)	m3	213		m142	185		24	132		33	33	0
Internal Link Dist (ft)		1010			443		682				290	
Turn Bay Length (ft)	130			360								
Base Capacity (vph)	212	2085		317	2980		309	501		271	271	382
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	0.46		0.61	0.45		0.05	0.55		0.08	0.08	0.03

Intersection Summary

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 27 (34%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.61  
 Intersection Signal Delay: 9.6 Intersection LOS: A  
 Intersection Capacity Utilization 60.0% ICU Level of Service B  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 24: Hyde Rd & Scott Swamp Rd (US 6)





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↓
Traffic Volume (vph)	778	330	171	1077	329	40
Future Volume (vph)	778	330	171	1077	329	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		350	350		380	0
Storage Lanes		1	1		1	0
Taper Length (ft)			100		130	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	0.95
Frt		0.850			0.984	
Flt Protected			0.950		0.957	
Satd. Flow (prot)	3574	1599	1787	3574	3437	0
Flt Permitted			0.950		0.957	
Satd. Flow (perm)	3574	1599	1787	3574	3437	0
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			45	30	
Link Distance (ft)	1087			600	782	
Travel Time (s)	16.5			9.1	17.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	846	359	186	1171	358	43
Shared Lane Traffic (%)						
Lane Group Flow (vph)	846	359	186	1171	401	0
Number of Detectors	0	0	3	0	1	
Detector Template						
Leading Detector (ft)	0	0	24	0	56	
Trailing Detector (ft)	0	0	-10	0	50	
Detector 1 Position(ft)	0	0	-10	0	50	
Detector 1 Size(ft)	6	20	6	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)			6			
Detector 2 Size(ft)			6			
Detector 2 Type			Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)			0.0			
Detector 3 Position(ft)			18			
Detector 3 Size(ft)			6			
Detector 3 Type			Cl+Ex			
Detector 3 Channel						
Detector 3 Extend (s)			0.0			
Turn Type	NA	pm+ov	Prot	NA	Prot	
Protected Phases	2	3	1	12	3	
Permitted Phases		2				
Detector Phase	2	3	1	2	3	
Switch Phase						

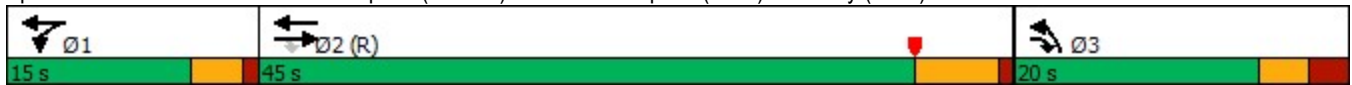


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	15.0	7.0	5.0		7.0	
Minimum Split (s)	21.0	29.5	9.0		29.5	
Total Split (s)	45.0	20.0	15.0		20.0	
Total Split (%)	56.3%	25.0%	18.8%		25.0%	
Maximum Green (s)	39.0	14.5	11.0		14.5	
Yellow Time (s)	5.0	3.0	3.0		3.0	
All-Red Time (s)	1.0	2.5	1.0		2.5	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.0	5.5	4.0		5.5	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	2.0		3.0	
Recall Mode	C-Max	None	Min		None	
Walk Time (s)		23.0			23.0	
Flash Dont Walk (s)		1.0			1.0	
Pedestrian Calls (#/hr)		0			0	
Act Effct Green (s)	41.0	59.8	10.7	57.8	12.7	
Actuated g/C Ratio	0.51	0.75	0.13	0.72	0.16	
v/c Ratio	0.46	0.30	0.78	0.45	0.73	
Control Delay	18.5	2.1	56.6	5.5	40.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	18.5	2.1	56.6	5.5	40.3	
LOS	B	A	E	A	D	
Approach Delay	13.6			12.5	40.3	
Approach LOS	B			B	D	
Queue Length 50th (ft)	161	14	89	107	98	
Queue Length 95th (ft)	242	19	#189	150	142	
Internal Link Dist (ft)	1007			520	702	
Turn Bay Length (ft)		350	350		380	
Base Capacity (vph)	1832	1229	251	2580	622	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.46	0.29	0.74	0.45	0.64	

**Intersection Summary**

Area Type: Other  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 18 (23%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.78  
 Intersection Signal Delay: 16.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 54.5%  
 ICU Level of Service A  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 25: Scott Swamp Rd (RT 552) & Scott Swamp Rd (US 6)/Colt Hwy (US 6)





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3
Lane Configurations							
Traffic Volume (vph)	152	156	217	386	559	215	
Future Volume (vph)	152	156	217	386	559	215	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor				1.00	0.99		
Frt	0.932				0.962		
Flt Protected	0.976			0.982			
Satd. Flow (prot)	1711	0	0	1847	1796	0	
Flt Permitted	0.976			0.082			
Satd. Flow (perm)	1711	0	0	154	1796	0	
Right Turn on Red		No				Yes	
Satd. Flow (RTOR)					18		
Link Speed (mph)	30			30	30		
Link Distance (ft)	345			413	499		
Travel Time (s)	7.8			9.4	11.3		
Confl. Peds. (#/hr)			4			4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	
Adj. Flow (vph)	157	161	224	398	576	222	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	318	0	0	622	798	0	
Number of Detectors	2		1	1	1		
Detector Template			Left				
Leading Detector (ft)	18		20	206	206		
Trailing Detector (ft)	0		0	200	200		
Detector 1 Position(ft)	0		0	200	200		
Detector 1 Size(ft)	6		20	6	6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		
Detector 2 Position(ft)	12						
Detector 2 Size(ft)	6						
Detector 2 Type	Cl+Ex						
Detector 2 Channel							
Detector 2 Extend (s)	0.0						
Turn Type	Prot		D.P+P	NA	NA		
Protected Phases	4		1	12	2	3	
Permitted Phases			2				
Detector Phase	4		1	1	2		
Switch Phase							
Minimum Initial (s)	5.0		3.0		15.0	1.0	
Minimum Split (s)	9.0		7.0		22.2	25.0	
Total Split (s)	34.0		12.0		39.2	25.0	
Total Split (%)	30.9%		10.9%		35.6%	23%	
Maximum Green (s)	30.0		8.0		32.0	21.0	
Yellow Time (s)	3.0		3.0		4.1	4.0	

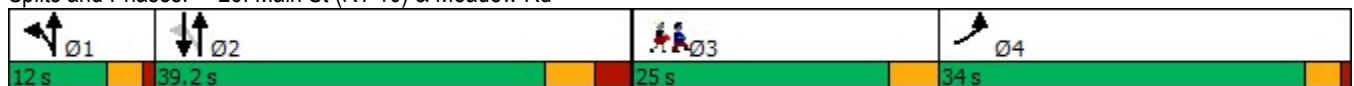


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3
All-Red Time (s)	1.0		1.0		3.1		0.0
Lost Time Adjust (s)	0.0				0.0		
Total Lost Time (s)	4.0				7.2		
Lead/Lag	Lag		Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes		Yes
Vehicle Extension (s)	3.0		3.0		5.0		3.0
Recall Mode	None		Max		Min		None
Walk Time (s)							7.0
Flash Dont Walk (s)							14.0
Pedestrian Calls (#/hr)							6
Act Effct Green (s)	19.4			44.5	33.0		
Actuated g/C Ratio	0.24			0.56	0.41		
v/c Ratio	0.77			2.39	1.06		
Control Delay	42.1			656.3	76.7		
Queue Delay	0.0			0.0	0.0		
Total Delay	42.1			656.3	76.7		
LOS	D			F	E		
Approach Delay	42.1			656.3	76.7		
Approach LOS	D			F	E		
Queue Length 50th (ft)	134			~443	~357		
Queue Length 95th (ft)	303			#980	#1021		
Internal Link Dist (ft)	265			333	419		
Turn Bay Length (ft)							
Base Capacity (vph)	661			260	751		
Starvation Cap Reductn	0			0	0		
Spillback Cap Reductn	0			0	0		
Storage Cap Reductn	0			0	0		
Reduced v/c Ratio	0.48			2.39	1.06		

Intersection Summary

Area Type: Other  
 Cycle Length: 110.2  
 Actuated Cycle Length: 79.9  
 Natural Cycle: 150  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 2.39  
 Intersection Signal Delay: 277.8  
 Intersection LOS: F  
 Intersection Capacity Utilization 105.6%  
 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.

Splits and Phases: 26: Main St (RT 10) & Meadow Rd





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	24	34	45	540	218	47
Future Volume (vph)	24	34	45	540	218	47
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	0.921			0.976		
Flt Protected	0.980			0.996		
Satd. Flow (prot)	1681	0	0	1855	1818	0
Flt Permitted	0.980			0.996		
Satd. Flow (perm)	1681	0	0	1855	1818	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	221			237	672	
Travel Time (s)	5.0			5.4	15.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	26	37	49	587	237	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	63	0	0	636	288	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	58.7%
ICU Level of Service	B
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	24	34	45	540	218	47
Future Vol, veh/h	24	34	45	540	218	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	37	49	587	237	51

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	948	263	288	0	-	0
Stage 1	263	-	-	-	-	-
Stage 2	685	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	289	776	1274	-	-	-
Stage 1	781	-	-	-	-	-
Stage 2	500	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	273	776	1274	-	-	-
Mov Cap-2 Maneuver	273	-	-	-	-	-
Stage 1	736	-	-	-	-	-
Stage 2	500	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.5	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1274	-	440	-	-
HCM Lane V/C Ratio	0.038	-	0.143	-	-
HCM Control Delay (s)	7.9	0	14.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	18	21	47	432	254	32
Future Volume (vph)	18	21	47	432	254	32
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	0.928			0.985		
Flt Protected	0.977			0.995		
Satd. Flow (prot)	1689	0	0	1853	1835	0
Flt Permitted	0.977			0.995		
Satd. Flow (perm)	1689	0	0	1853	1835	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	482			255	250	
Travel Time (s)	11.0			5.8	5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	23	51	470	276	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	43	0	0	521	311	0
Sign Control	Stop			Free	Free	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	54.0%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	18	21	47	432	254	32
Future Vol, veh/h	18	21	47	432	254	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	23	51	470	276	35

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	866	294	311	0	0
Stage 1	294	-	-	-	-
Stage 2	572	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	324	745	1249	-	-
Stage 1	756	-	-	-	-
Stage 2	565	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	306	745	1249	-	-
Mov Cap-2 Maneuver	306	-	-	-	-
Stage 1	714	-	-	-	-
Stage 2	565	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.9	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1249	-	448	-	-
HCM Lane V/C Ratio	0.041	-	0.095	-	-
HCM Control Delay (s)	8	0	13.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Farmington Connectivity Study  
 29: Whispering Rod Rd/Chaffee Ln & W District Rd

2050 Scenario 4 (Route 177 & Build) Conditions

PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	23	62	3	10	155	19	3	0	4	23	2	26
Future Volume (vph)	23	62	3	10	155	19	3	0	4	23	2	26
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	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.986			0.923			0.931	
Flt Protected		0.987			0.997			0.979			0.978	
Satd. Flow (prot)	0	1831	0	0	1831	0	0	1683	0	0	1696	0
Flt Permitted		0.987			0.997			0.979			0.978	
Satd. Flow (perm)	0	1831	0	0	1831	0	0	1683	0	0	1696	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		361			319			306			370	
Travel Time (s)		8.2			7.3			7.0			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
Adj. Flow (vph)	25	67	3	11	168	21	3	0	4	25	2	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	95	0	0	200	0	0	7	0	0	55	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 22.8%

ICU Level of Service A

Analysis Period (min) 15

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

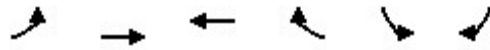
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	23	62	3	10	155	19	3	0	4	23	2	26
Future Vol, veh/h	23	62	3	10	155	19	3	0	4	23	2	26
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	67	3	11	168	21	3	0	4	25	2	28
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.9	8.3	7.4	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	43%	26%	5%	45%
Vol Thru, %	0%	70%	84%	4%
Vol Right, %	57%	3%	10%	51%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	7	88	184	51
LT Vol	3	23	10	23
Through Vol	0	62	155	2
RT Vol	4	3	19	26
Lane Flow Rate	8	96	200	55
Geometry Grp	1	1	1	1
Degree of Util (X)	0.009	0.112	0.226	0.067
Departure Headway (Hd)	4.386	4.228	4.065	4.371
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	821	837	876	824
Service Time	2.388	2.31	2.128	2.371
HCM Lane V/C Ratio	0.01	0.115	0.228	0.067
HCM Control Delay	7.4	7.9	8.3	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0.4	0.9	0.2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	98	13	16	664	413	215
Future Volume (vph)	98	13	16	664	413	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	35			55	450	0
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	1863	1863	1583	1770	1583
Flt Permitted	0.549				0.950	
Satd. Flow (perm)	1023	1863	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				722		234
Link Speed (mph)		30	30		30	
Link Distance (ft)		495	672		1044	
Travel Time (s)		11.3	15.3		23.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	107	14	17	722	449	234
Shared Lane Traffic (%)						
Lane Group Flow (vph)	107	14	17	722	449	234
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
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	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases	6			2		4
Detector Phase	1	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	9.0	31.0	31.0	21.0	21.0
Total Split (s)	13.0	44.0	31.0	31.0	21.0	21.0
Total Split (%)	20.0%	67.7%	47.7%	47.7%	32.3%	32.3%
Maximum Green (s)	9.0	40.0	27.0	27.0	17.0	17.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0

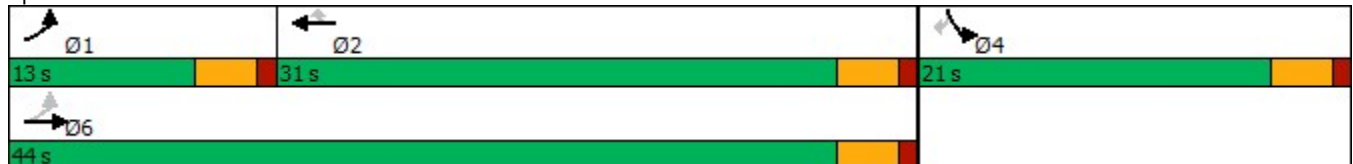


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead		Lag		Lag	
Lead-Lag Optimize?	Yes		Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Min	Min	Min	None	None
Walk Time (s)			7.0	7.0	7.0	7.0
Flash Dont Walk (s)			20.0	20.0	11.0	11.0
Pedestrian Calls (#/hr)			0	0	0	0
Act Effct Green (s)	17.1	17.1	11.1	11.1	17.8	17.8
Actuated g/C Ratio	0.39	0.39	0.25	0.25	0.41	0.41
v/c Ratio	0.20	0.02	0.04	0.77	0.62	0.30
Control Delay	7.6	5.8	12.8	7.6	21.5	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.6	5.8	12.8	7.6	21.5	4.2
LOS	A	A	B	A	C	A
Approach Delay	7.4		7.8		15.6	
Approach LOS	A		A		B	
Queue Length 50th (ft)	15	2	4	0	88	0
Queue Length 95th (ft)	32	7	14	58	#342	47
Internal Link Dist (ft)	415		592		964	
Turn Bay Length (ft)	35		55		450	
Base Capacity (vph)	610	1609	1263	1306	755	810
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	0.18	0.01	0.01	0.55	0.59	0.29

Intersection Summary

Area Type: Other  
 Cycle Length: 65  
 Actuated Cycle Length: 43.7  
 Natural Cycle: 65  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 11.2  
 Intersection LOS: B  
 Intersection Capacity Utilization 53.2%  
 ICU Level of Service A  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 30: New Britain Ave & Montieth Dr





HCM 6th Roundabout  
5: Farmington Ave (RT 4) & Monteith Dr

02/14/2024

Intersection									
Intersection Delay, s/veh	15.4								
Intersection LOS	C								
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	2		2		2		2		
Adj Approach Flow, veh/h	1058		1175		660		415		
Demand Flow Rate, veh/h	1079		1199		672		424		
Vehicles Circulating, veh/h	525		661		1005		850		
Vehicles Exiting, veh/h	749		1016		599		486		
Ped Vol Crossing Leg, #/h	0		0		0		3		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	20.4		6.4		26.9		9.9		
Approach LOS	C		A		D		A		
Lane	Left	Right	Left	Right	Bypass	Left	Right	Left	Right
Designated Moves	L	TR	L	TR	R	L	TR	L	TR
Assumed Moves	L	TR	L	TR	R	L	TR	L	TR
RT Channelized	Free								
Lane Util	0.295	0.705	0.342	0.658		0.260	0.740	0.434	0.566
Follow-Up Headway, s	2.667	2.535	2.667	2.535		2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	524	4.645	4.328	4.645	4.328
Entry Flow, veh/h	318	761	231	444	1938	175	497	184	240
Cap Entry Lane, veh/h	833	909	735	810	0.980	536	604	618	689
Entry HV Adj Factor	0.981	0.980	0.978	0.980	514	0.983	0.981	0.978	0.979
Flow Entry, veh/h	312	746	226	435	1900	172	488	180	235
Cap Entry, veh/h	817	891	719	794	0.271	526	593	604	674
V/C Ratio	0.382	0.837	0.314	0.548	0.0	0.327	0.822	0.298	0.348
Control Delay, s/veh	9.0	25.1	8.9	12.6	A	11.8	32.2	10.0	9.9
LOS	A	D	A	B	1	B	D	A	A
95th %tile Queue, veh	2	10	1	3		1	8	1	2

Intersection			
Intersection Delay, s/veh	8.1		
Intersection LOS	A		
Approach	EB	WB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	324	577	587
Demand Flow Rate, veh/h	331	588	599
Vehicles Circulating, veh/h	557	100	13
Vehicles Exiting, veh/h	55	788	675
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	10.2	7.9	7.0
Approach LOS	B	A	A
Lane	Left	Left	Left
Designated Moves	LT	TR	LR
Assumed Moves	LT	TR	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	331	588	599
Cap Entry Lane, veh/h	782	1246	1362
Entry HV Adj Factor	0.980	0.981	0.980
Flow Entry, veh/h	324	577	587
Cap Entry, veh/h	766	1222	1334
V/C Ratio	0.423	0.472	0.440
Control Delay, s/veh	10.2	7.9	7.0
LOS	B	A	A
95th %tile Queue, veh	2	3	2

HCM 6th Roundabout  
5: Farmington Ave (RT 4) & Monteith Dr
























02/14/2024

Intersection									
Intersection Delay, s/veh	14.2								
Intersection LOS	B								
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	2		2		2		2		
Adj Approach Flow, veh/h	892		965		557		191		
Demand Flow Rate, veh/h	895		970		568		193		
Vehicles Circulating, veh/h	423		350		792		1130		
Vehicles Exiting, veh/h	900		1010		526		128		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	22.1		9.4		11.3		9.8		
Approach LOS	C		A		B		A		
Lane	Left	Right	Left	Right	Bypass	Left	Right	Left	Right
Designated Moves	L	TR	L	TR	R	L	TR	L	TR
Assumed Moves	L	TR	L	TR	R	L	TR	L	TR
RT Channelized	Free								
Lane Util	0.072	0.928	0.296	0.704		0.391	0.609	0.332	0.668
Follow-Up Headway, s	2.667	2.535	2.667	2.535		2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	62	4.645	4.328	4.645	4.328
Entry Flow, veh/h	64	831	269	639	1900	222	346	64	129
Cap Entry Lane, veh/h	915	991	978	1055	1.000	651	724	477	543
Entry HV Adj Factor	1.000	0.996	0.981	1.000	62	0.982	0.979	1.000	0.986
Flow Entry, veh/h	64	828	264	639	1900	218	339	64	127
Cap Entry, veh/h	915	988	960	1055	0.033	640	709	477	536
V/C Ratio	0.070	0.838	0.275	0.606	0.0	0.341	0.478	0.134	0.237
Control Delay, s/veh	4.6	23.4	6.5	11.5	A	10.2	12.0	9.4	10.0
LOS	A	C	A	B	0	B	B	A	A
95th %tile Queue, veh	0	10	1	4		2	3	0	1

Intersection			
Intersection Delay, s/veh	8.4		
Intersection LOS	A		
Approach	EB	WB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	80	697	517
Demand Flow Rate, veh/h	82	711	527
Vehicles Circulating, veh/h	451	52	196
Vehicles Exiting, veh/h	272	481	567
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.1	8.8	8.4
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LT	TR	LR
Assumed Moves	LT	TR	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	82	711	527
Cap Entry Lane, veh/h	871	1309	1130
Entry HV Adj Factor	0.981	0.981	0.981
Flow Entry, veh/h	80	697	517
Cap Entry, veh/h	854	1283	1108
V/C Ratio	0.094	0.543	0.466
Control Delay, s/veh	5.1	8.8	8.4
LOS	A	A	A
95th %tile Queue, veh	0	3	3

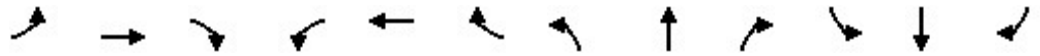
Lanes, Volumes, Timings  
5: Farmington Ave (RT 4) & Monteith Dr

02/14/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	231	365	233	208	322	380	158	152	297	133	99	94
Future Volume (vph)	231	365	233	208	322	380	158	152	297	133	99	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120		0	280		55	245		75	0		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00					0.98						
Frt		0.949				0.850			0.850		0.919	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1768	0	1770	1863	1583	1770	1863	1583	1770	1712	0
Flt Permitted	0.374			0.104			0.224			0.653		
Satd. Flow (perm)	696	1768	0	194	1863	1559	417	1863	1583	1216	1712	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32				239			323		54	
Link Speed (mph)		35			35			30			25	
Link Distance (ft)		784			925			1010			548	
Travel Time (s)		15.3			18.0			23.0			14.9	
Confl. Peds. (#/hr)	3					3						
Peak Hour Factor	0.74	0.74	0.92	0.92	0.74	0.74	0.92	0.92	0.92	0.74	0.92	0.74
Adj. Flow (vph)	312	493	253	226	435	514	172	165	323	180	108	127
Shared Lane Traffic (%)												
Lane Group Flow (vph)	312	746	0	226	435	514	172	165	323	180	235	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			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		20			16			16			25	
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	0		1	1	1	1	2	1	3	2	
Detector Template	Left			Left		Right	Left	Thru	Right			Thru
Leading Detector (ft)	20	0		20	356	20	20	100	20	24	100	
Trailing Detector (ft)	0	0		0	350	0	0	0	0	-6	0	
Detector 1 Position(ft)	0	0		0	350	0	0	0	0	-6	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)								94		6	94	
Detector 2 Size(ft)								6		6	6	
Detector 2 Type								Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0		0.0	0.0	
Detector 3 Position(ft)										18		

Lanes, Volumes, Timings  
5: Farmington Ave (RT 4) & Monteith Dr

02/14/2024

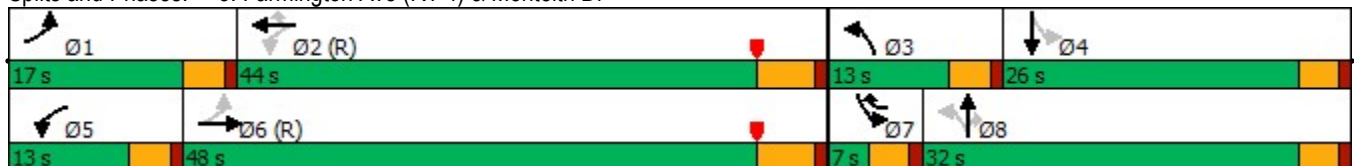


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 3 Size(ft)											6	
Detector 3 Type											CI+Ex	
Detector 3 Channel												
Detector 3 Extend (s)											0.0	
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	1	6		5	2	7	3	8		7	4	
Permitted Phases	6			2		2	8		8	4		
Detector Phase	1	6		5	2	7	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.0	32.4		9.0	32.4	9.0	9.0	21.0	21.0	9.0	21.0	
Total Split (s)	17.0	48.0		13.0	44.0	7.0	13.0	32.0	32.0	7.0	26.0	
Total Split (%)	17.0%	48.0%		13.0%	44.0%	7.0%	13.0%	32.0%	32.0%	7.0%	26.0%	
Maximum Green (s)	13.0	42.6		9.0	38.6	3.0	9.0	28.0	28.0	3.0	22.0	
Yellow Time (s)	3.0	4.4		3.0	4.4	3.0	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	5.4		4.0	5.4	4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	1.5	3.0	3.0	3.0	1.5	3.0	
Recall Mode	None	C-Min		None	C-Min	None	None	None	None	None	None	
Walk Time (s)	7.0			7.0				7.0	7.0	7.0		
Flash Dont Walk (s)	20.0			20.0				10.0	10.0	10.0		
Pedestrian Calls (#/hr)	3			3				3	3	3		
Act Effct Green (s)	59.3	45.5		59.0	45.3	50.7	28.2	20.9	20.9	19.8	15.9	
Actuated g/C Ratio	0.59	0.46		0.59	0.45	0.51	0.28	0.21	0.21	0.20	0.16	
v/c Ratio	0.57	0.91		0.73	0.52	0.57	0.72	0.42	0.55	0.69	0.74	
Control Delay	13.8	42.3		35.3	24.0	11.4	45.2	36.2	7.2	47.5	44.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	13.8	42.3		35.3	24.0	11.4	45.2	36.2	7.2	47.5	44.3	
LOS	B	D		D	C	B	D	D	A	D	D	
Approach Delay	33.9			20.7				24.4		45.7		
Approach LOS	C			C				C		D		

Intersection Summary

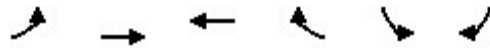
Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	16 (16%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.91
Intersection Signal Delay:	28.8
Intersection LOS:	C
Intersection Capacity Utilization	79.2%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 5: Farmington Ave (RT 4) & Monteith Dr



Lanes, Volumes, Timings  
30: New Britain Ave & Monteith Dr

02/14/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	90	208	12	519	502	38
Future Volume (vph)	90	208	12	519	502	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	35			55	450	0
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
Fr <sub>t</sub>				0.850		0.850
Fl <sub>t</sub> Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Fl <sub>t</sub> Permitted	0.544				0.950	
Satd. Flow (perm)	1013	1863	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				564		41
Link Speed (mph)		30	30		30	
Link Distance (ft)		755	691		1010	
Travel Time (s)		17.2	15.7		23.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	98	226	13	564	546	41
Shared Lane Traffic (%)						
Lane Group Flow (vph)	98	226	13	564	546	41
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60			60	60	60
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
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	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases	6			2		4

Lanes, Volumes, Timings  
30: New Britain Ave & Monteith Dr

02/14/2024

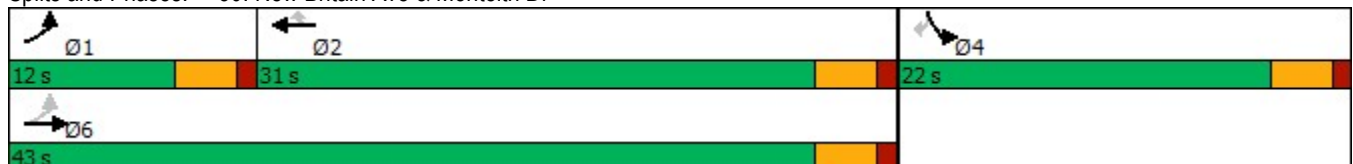


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	1	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	9.0	31.0	31.0	21.0	21.0
Total Split (s)	12.0	43.0	31.0	31.0	22.0	22.0
Total Split (%)	18.5%	66.2%	47.7%	47.7%	33.8%	33.8%
Maximum Green (s)	8.0	39.0	27.0	27.0	18.0	18.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
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	4.0	4.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	Min	Min	Min	Min
Walk Time (s)			7.0	7.0	7.0	7.0
Flash Dont Walk (s)			20.0	20.0	10.0	10.0
Pedestrian Calls (#/hr)			3	3	3	3
Act Effct Green (s)	21.6	21.6	10.5	10.5	18.5	18.5
Actuated g/C Ratio	0.45	0.45	0.22	0.22	0.38	0.38
v/c Ratio	0.17	0.27	0.03	0.72	0.81	0.06
Control Delay	7.7	8.6	13.2	7.4	28.9	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.7	8.6	13.2	7.4	28.9	6.3
LOS	A	A	B	A	C	A
Approach Delay		8.3	7.5		27.3	
Approach LOS		A	A		C	

Intersection Summary
























Area Type:	Other
Cycle Length:	65
Actuated Cycle Length:	48.3
Natural Cycle:	65
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.81
Intersection Signal Delay:	15.5
Intersection LOS:	B
Intersection Capacity Utilization:	46.1%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 30: New Britain Ave & Monteith Dr



Lanes, Volumes, Timings  
5: Farmington Ave (RT 4) & Monteith Dr

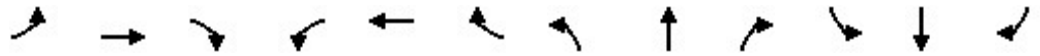
02/14/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	584	151	243	562	55	201	58	254	56	81	34
Future Volume (vph)	56	584	151	243	562	55	201	58	254	56	81	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120		0	280		55	245		75	0		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.970				0.850			0.850		0.954	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1836	0	1770	1900	1615	1770	1863	1583	1805	1788	0
Flt Permitted	0.326			0.082			0.398			0.716		
Satd. Flow (perm)	619	1836	0	153	1900	1615	741	1863	1583	1360	1788	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16				98			276		19	
Link Speed (mph)		35			35			30			25	
Link Distance (ft)		784			925			1010			548	
Travel Time (s)		15.3			18.0			23.0			14.9	
Peak Hour Factor	0.88	0.88	0.92	0.92	0.88	0.88	0.92	0.92	0.92	0.88	0.92	0.88
Heavy Vehicles (%)	0%	0%	2%	2%	0%	0%	2%	2%	2%	0%	2%	0%
Adj. Flow (vph)	64	664	164	264	639	63	218	63	276	64	88	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	64	828	0	264	639	63	218	63	276	64	127	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			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		20			16			16			25	
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		60	60		9	60		60	15		9
Number of Detectors	1	0		1	1	1	1	2	1	3	2	
Detector Template	Left			Left		Right	Left	Thru	Right		Thru	
Leading Detector (ft)	20	0		20	356	20	20	100	20	24	100	
Trailing Detector (ft)	0	0		0	350	0	0	0	0	-6	0	
Detector 1 Position(ft)	0	0		0	350	0	0	0	0	-6	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)								94		6	94	
Detector 2 Size(ft)								6		6	6	
Detector 2 Type								Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0		0.0	0.0	
Detector 3 Position(ft)										18		
Detector 3 Size(ft)										6		

# Lanes, Volumes, Timings

## 5: Farmington Ave (RT 4) & Monteith Dr

02/14/2024

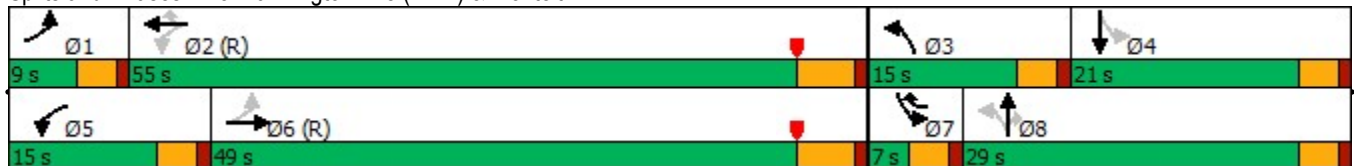


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 3 Type	Cl+Ex											
Detector 3 Channel												
Detector 3 Extend (s)	0.0											
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	1	6		5	2	7	3	8		7	4	
Permitted Phases	6			2		2	8		8	4		
Detector Phase	1	6		5	2	7	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.0	32.4		9.0	32.4	9.0	9.0	21.0	21.0	9.0	21.0	
Total Split (s)	9.0	49.0		15.0	55.0	7.0	15.0	29.0	29.0	7.0	21.0	
Total Split (%)	9.0%	49.0%		15.0%	55.0%	7.0%	15.0%	29.0%	29.0%	7.0%	21.0%	
Maximum Green (s)	5.0	43.6		11.0	49.6	3.0	11.0	25.0	25.0	3.0	17.0	
Yellow Time (s)	3.0	4.4		3.0	4.4	3.0	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	5.4		4.0	5.4	4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	1.5	3.0	3.0	3.0	1.5	3.0	
Recall Mode	None	C-Min		None	C-Min	None	None	None	None	None	None	
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	
Flash Dont Walk (s)		20.0			20.0			10.0	10.0		10.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	53.3	45.6		65.7	55.9	64.3	26.3	20.7	20.7	14.4	11.4	
Actuated g/C Ratio	0.53	0.46		0.66	0.56	0.64	0.26	0.21	0.21	0.14	0.11	
v/c Ratio	0.16	0.98		0.78	0.60	0.06	0.71	0.16	0.51	0.31	0.58	
Control Delay	8.7	54.9		39.7	19.3	0.8	44.2	33.2	7.5	33.5	45.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	8.7	54.9		39.7	19.3	0.8	44.2	33.2	7.5	33.5	45.3	
LOS	A	D		D	B	A	D	C	A	C	D	
Approach Delay		51.6			23.7			24.8			41.4	
Approach LOS		D			C			C			D	

### Intersection Summary

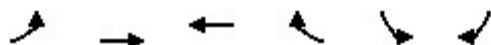
Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 10 (10%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.98  
 Intersection Signal Delay: 34.7  
 Intersection LOS: C  
 Intersection Capacity Utilization 82.3%  
 ICU Level of Service E  
 Analysis Period (min) 15

### Splits and Phases: 5: Farmington Ave (RT 4) & Monteith Dr



Lanes, Volumes, Timings  
30: New Britain Ave & Monteith Dr

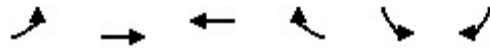
02/14/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	47	27	177	465	407	69
Future Volume (vph)	47	27	177	465	407	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	35			55	450	0
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
Fr <sub>t</sub>				0.850		0.850
Fl <sub>t</sub> Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Fl <sub>t</sub> Permitted	0.479				0.950	
Satd. Flow (perm)	892	1863	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				505		75
Link Speed (mph)		30	30		30	
Link Distance (ft)		755	691		1010	
Travel Time (s)		17.2	15.7		23.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	51	29	192	505	442	75
Shared Lane Traffic (%)						
Lane Group Flow (vph)	51	29	192	505	442	75
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
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	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases	6			2		4

Lanes, Volumes, Timings  
30: New Britain Ave & Monteith Dr

02/14/2024

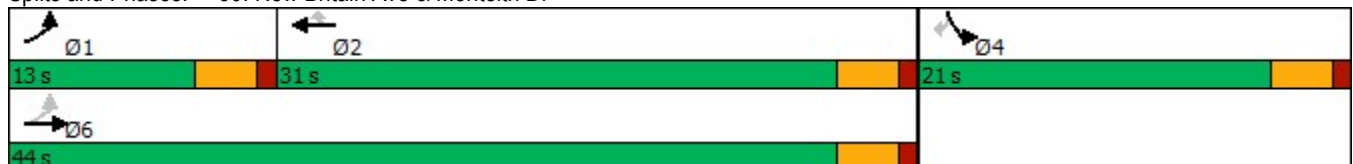


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	1	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.0	9.0	31.0	31.0	21.0	21.0
Total Split (s)	13.0	44.0	31.0	31.0	21.0	21.0
Total Split (%)	20.0%	67.7%	47.7%	47.7%	32.3%	32.3%
Maximum Green (s)	9.0	40.0	27.0	27.0	17.0	17.0
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
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	4.0	4.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Min	Min	Min	None	None
Walk Time (s)			7.0	7.0	7.0	7.0
Flash Dont Walk (s)			20.0	20.0	10.0	10.0
Pedestrian Calls (#/hr)			0	0	0	0
Act Effct Green (s)	15.5	15.5	12.1	12.1	16.8	16.8
Actuated g/C Ratio	0.38	0.38	0.30	0.30	0.41	0.41
v/c Ratio	0.11	0.04	0.35	0.61	0.61	0.11
Control Delay	7.3	6.6	14.3	5.3	18.6	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.3	6.6	14.3	5.3	18.6	4.8
LOS	A	A	B	A	B	A
Approach Delay		7.0	7.8		16.6	
Approach LOS		A	A		B	

Intersection Summary

Area Type:	Other
Cycle Length:	65
Actuated Cycle Length:	40.8
Natural Cycle:	65
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.61
Intersection Signal Delay:	11.3
Intersection LOS:	B
Intersection Capacity Utilization	46.0%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 30: New Britain Ave & Monteith Dr



Lanes, Volumes, Timings  
5: Farmington Ave (RT 4) & Monteith Dr

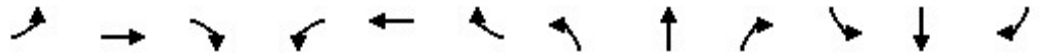
02/14/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	231	365	233	208	322	380	158	152	297	133	99	94
Future Volume (vph)	231	365	233	208	322	380	158	152	297	133	99	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120		0	280		55	245		75	0		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00					0.98						
Frt		0.949				0.850			0.850		0.919	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1768	0	1770	1863	1583	1770	1863	1583	1770	1712	0
Flt Permitted	0.374			0.104			0.224			0.653		
Satd. Flow (perm)	696	1768	0	194	1863	1559	417	1863	1583	1216	1712	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32				239			323		54	
Link Speed (mph)		35			35			30			25	
Link Distance (ft)		784			925			1010			548	
Travel Time (s)		15.3			18.0			23.0			14.9	
Confl. Peds. (#/hr)	3					3						
Peak Hour Factor	0.74	0.74	0.92	0.92	0.74	0.74	0.92	0.92	0.92	0.74	0.92	0.74
Adj. Flow (vph)	312	493	253	226	435	514	172	165	323	180	108	127
Shared Lane Traffic (%)												
Lane Group Flow (vph)	312	746	0	226	435	514	172	165	323	180	235	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			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		20			16			16			25	
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	0		1	1	1	1	2	1	3	2	
Detector Template	Left			Left		Right	Left	Thru	Right			Thru
Leading Detector (ft)	20	0		20	356	20	20	100	20	24	100	
Trailing Detector (ft)	0	0		0	350	0	0	0	0	-6	0	
Detector 1 Position(ft)	0	0		0	350	0	0	0	0	-6	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)								94		6	94	
Detector 2 Size(ft)								6		6	6	
Detector 2 Type								Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0		0.0	0.0	
Detector 3 Position(ft)										18		

Lanes, Volumes, Timings  
5: Farmington Ave (RT 4) & Monteith Dr

02/14/2024

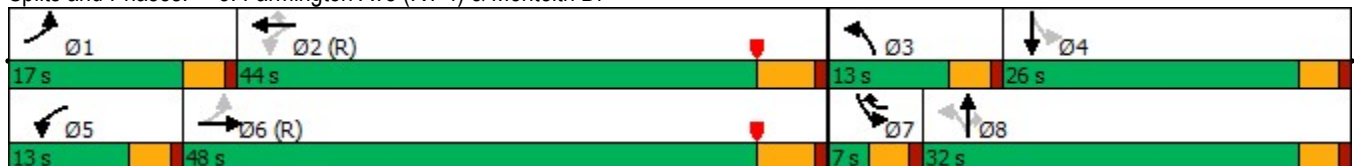


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 3 Size(ft)											6	
Detector 3 Type											CI+Ex	
Detector 3 Channel												
Detector 3 Extend (s)											0.0	
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	1	6		5	2	7	3	8		7	4	
Permitted Phases	6			2		2	8		8	4		
Detector Phase	1	6		5	2	7	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.0	32.4		9.0	32.4	9.0	9.0	21.0	21.0	9.0	21.0	
Total Split (s)	17.0	48.0		13.0	44.0	7.0	13.0	32.0	32.0	7.0	26.0	
Total Split (%)	17.0%	48.0%		13.0%	44.0%	7.0%	13.0%	32.0%	32.0%	7.0%	26.0%	
Maximum Green (s)	13.0	42.6		9.0	38.6	3.0	9.0	28.0	28.0	3.0	22.0	
Yellow Time (s)	3.0	4.4		3.0	4.4	3.0	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	5.4		4.0	5.4	4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	1.5	3.0	3.0	3.0	1.5	3.0	
Recall Mode	None	C-Min		None	C-Min	None	None	None	None	None	None	
Walk Time (s)	7.0			7.0				7.0	7.0	7.0		
Flash Dont Walk (s)	20.0			20.0				10.0	10.0	10.0		
Pedestrian Calls (#/hr)	3			3				3	3	3		
Act Effct Green (s)	59.3	45.5		59.0	45.3	50.7	28.2	20.9	20.9	19.8	15.9	
Actuated g/C Ratio	0.59	0.46		0.59	0.45	0.51	0.28	0.21	0.21	0.20	0.16	
v/c Ratio	0.57	0.91		0.73	0.52	0.57	0.72	0.42	0.55	0.69	0.74	
Control Delay	13.8	42.3		35.3	24.0	11.4	45.2	36.2	7.2	47.5	44.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	13.8	42.3		35.3	24.0	11.4	45.2	36.2	7.2	47.5	44.3	
LOS	B	D		D	C	B	D	D	A	D	D	
Approach Delay	33.9			20.7				24.4		45.7		
Approach LOS	C			C				C		D		

Intersection Summary

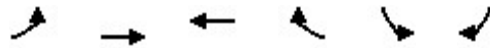
Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	16 (16%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.91
Intersection Signal Delay:	28.8
Intersection LOS:	C
Intersection Capacity Utilization	79.2%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 5: Farmington Ave (RT 4) & Monteith Dr



Lanes, Volumes, Timings  
30: New Britain Ave & Monteith Dr

02/14/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	90	208	12	519	502	38
Future Volume (vph)	90	208	12	519	502	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	35			55	450	0
Storage Lanes	0			0	0	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.868		0.991	
Flt Protected		0.985			0.956	
Satd. Flow (prot)	0	1835	1617	0	1765	0
Flt Permitted		0.985			0.956	
Satd. Flow (perm)	0	1835	1617	0	1765	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		755	691		1010	
Travel Time (s)		17.2	15.7		23.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	98	226	13	564	546	41
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	324	577	0	587	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60			60	60	60
Sign Control		Yield	Yield		Yield	
























Intersection Summary

Area Type:	Other
Control Type:	Roundabout
Intersection Capacity Utilization	88.8%
ICU Level of Service	E
Analysis Period (min)	15

Intersection			
Intersection Delay, s/veh	8.1		
Intersection LOS	A		
Approach	EB	WB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	324	577	587
Demand Flow Rate, veh/h	331	588	599
Vehicles Circulating, veh/h	557	100	13
Vehicles Exiting, veh/h	55	788	675
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	10.2	7.9	7.0
Approach LOS	B	A	A
Lane	Left	Left	Left
Designated Moves	LT	TR	LR
Assumed Moves	LT	TR	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	331	588	599
Cap Entry Lane, veh/h	782	1246	1362
Entry HV Adj Factor	0.980	0.981	0.980
Flow Entry, veh/h	324	577	587
Cap Entry, veh/h	766	1222	1334
V/C Ratio	0.423	0.472	0.440
Control Delay, s/veh	10.2	7.9	7.0
LOS	B	A	A
95th %tile Queue, veh	2	3	2

Lanes, Volumes, Timings  
5: Farmington Ave (RT 4) & Monteith Dr

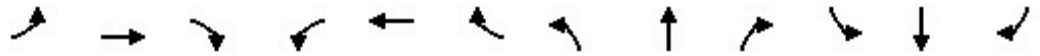
02/14/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	584	151	243	562	55	201	58	254	56	81	34
Future Volume (vph)	56	584	151	243	562	55	201	58	254	56	81	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120		0	280		55	245		75	0		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.970				0.850			0.850		0.954	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1836	0	1770	1900	1615	1770	1863	1583	1805	1788	0
Flt Permitted	0.326			0.082			0.398			0.716		
Satd. Flow (perm)	619	1836	0	153	1900	1615	741	1863	1583	1360	1788	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16				98			276		19	
Link Speed (mph)		35			35			30			25	
Link Distance (ft)		784			925			1010			548	
Travel Time (s)		15.3			18.0			23.0			14.9	
Peak Hour Factor	0.88	0.88	0.92	0.92	0.88	0.88	0.92	0.92	0.92	0.88	0.92	0.88
Heavy Vehicles (%)	0%	0%	2%	2%	0%	0%	2%	2%	2%	0%	2%	0%
Adj. Flow (vph)	64	664	164	264	639	63	218	63	276	64	88	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	64	828	0	264	639	63	218	63	276	64	127	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			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		20			16			16			25	
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		60	60		9	60		60	15		9
Number of Detectors	1	0		1	1	1	1	2	1	3	2	
Detector Template	Left			Left		Right	Left	Thru	Right		Thru	
Leading Detector (ft)	20	0		20	356	20	20	100	20	24	100	
Trailing Detector (ft)	0	0		0	350	0	0	0	0	-6	0	
Detector 1 Position(ft)	0	0		0	350	0	0	0	0	-6	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6	20	6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)								94		6	94	
Detector 2 Size(ft)								6		6	6	
Detector 2 Type								Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0		0.0	0.0	
Detector 3 Position(ft)										18		
Detector 3 Size(ft)										6		

# Lanes, Volumes, Timings

## 5: Farmington Ave (RT 4) & Monteith Dr

02/14/2024

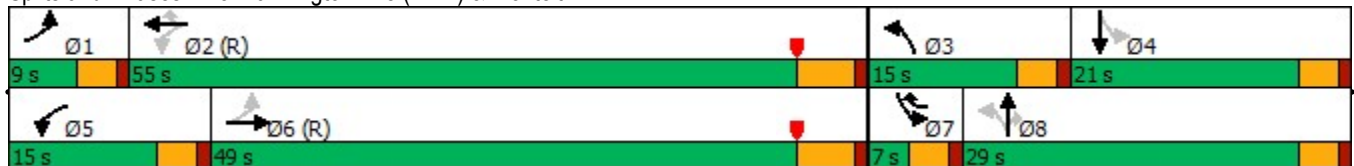


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 3 Type	Cl+Ex											
Detector 3 Channel												
Detector 3 Extend (s)	0.0											
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	1	6		5	2	7	3	8		7	4	
Permitted Phases	6			2		2	8		8	4		
Detector Phase	1	6		5	2	7	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.0	32.4		9.0	32.4	9.0	9.0	21.0	21.0	9.0	21.0	
Total Split (s)	9.0	49.0		15.0	55.0	7.0	15.0	29.0	29.0	7.0	21.0	
Total Split (%)	9.0%	49.0%		15.0%	55.0%	7.0%	15.0%	29.0%	29.0%	7.0%	21.0%	
Maximum Green (s)	5.0	43.6		11.0	49.6	3.0	11.0	25.0	25.0	3.0	17.0	
Yellow Time (s)	3.0	4.4		3.0	4.4	3.0	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	5.4		4.0	5.4	4.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	1.5	3.0	3.0	3.0	1.5	3.0	
Recall Mode	None	C-Min		None	C-Min	None	None	None	None	None	None	
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	
Flash Dont Walk (s)		20.0			20.0			10.0	10.0		10.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	53.3	45.6		65.7	55.9	64.3	26.3	20.7	20.7	14.4	11.4	
Actuated g/C Ratio	0.53	0.46		0.66	0.56	0.64	0.26	0.21	0.21	0.14	0.11	
v/c Ratio	0.16	0.98		0.78	0.60	0.06	0.71	0.16	0.51	0.31	0.58	
Control Delay	8.7	54.9		39.7	19.3	0.8	44.2	33.2	7.5	33.5	45.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	8.7	54.9		39.7	19.3	0.8	44.2	33.2	7.5	33.5	45.3	
LOS	A	D		D	B	A	D	C	A	C	D	
Approach Delay		51.6			23.7			24.8			41.4	
Approach LOS		D			C			C			D	

### Intersection Summary

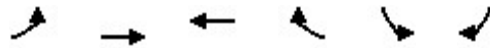
Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 10 (10%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.98  
 Intersection Signal Delay: 34.7  
 Intersection LOS: C  
 Intersection Capacity Utilization 82.3%  
 ICU Level of Service E  
 Analysis Period (min) 15

### Splits and Phases: 5: Farmington Ave (RT 4) & Monteith Dr



Lanes, Volumes, Timings  
30: New Britain Ave & Monteith Dr

02/14/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↘	↙
Traffic Volume (vph)	47	27	177	465	407	69
Future Volume (vph)	47	27	177	465	407	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	35			55	450	0
Storage Lanes	0			0	0	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.902		0.980	
Flt Protected		0.969			0.959	
Satd. Flow (prot)	0	1805	1680	0	1751	0
Flt Permitted		0.969			0.959	
Satd. Flow (perm)	0	1805	1680	0	1751	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		755	691		1010	
Travel Time (s)		17.2	15.7		23.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	51	29	192	505	442	75
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	80	697	0	517	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		24	
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		Yield	Yield		Yield	

Intersection Summary

Area Type:	Other
Control Type:	Roundabout
Intersection Capacity Utilization	76.5%
ICU Level of Service	D
Analysis Period (min)	15

Intersection			
Intersection Delay, s/veh	8.4		
Intersection LOS	A		
Approach	EB	WB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	80	697	517
Demand Flow Rate, veh/h	82	711	527
Vehicles Circulating, veh/h	451	52	196
Vehicles Exiting, veh/h	272	481	567
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.1	8.8	8.4
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LT	TR	LR
Assumed Moves	LT	TR	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	82	711	527
Cap Entry Lane, veh/h	871	1309	1130
Entry HV Adj Factor	0.981	0.981	0.981
Flow Entry, veh/h	80	697	517
Cap Entry, veh/h	854	1283	1108
V/C Ratio	0.094	0.543	0.466
Control Delay, s/veh	5.1	8.8	8.4
LOS	A	A	A
95th %tile Queue, veh	0	3	3



# Appendix G Stakeholder Meetings

## Farmington Area Connectivity Study

Capitol Region Council of Governments and Town of Farmington

SLR Project No.: 141.12020.00019

January 16, 2024

## Report of Meeting

### Event: Stakeholder Meeting #1- Selected Municipalities and Councils of Governments

Date and Time: Thursday, November 18, 2021, 10:00 AM (via Microsoft Teams)

#### 1. Attendees:

- Town of Farmington
  - Russell Arnold, P.E. - Director of Public Works/ Town Engineer
  - Shannon Rutherford, P.E. - Town Planner
  
- Town of Avon
  - Hiram Peck, III, AICP, CFM, ZEO – Director of Planning & Community Development
  - Larry Baril, P.E., GISP - Town Engineer
  
- City of Bristol
  - Nancy Levesque, P.E. – City Engineer
  
- Naugatuck Valley Council of Governments (NVCOG)
  - Mark Nielson, - Director of Planning/Assistant Director
  
- CT Department of Transportation (CTDOT)
  - Matthew Blume
  - Marissa Pfaffinger
  - Obesebea Aye-Addo
  - Shraddha Joshi
  - Grayson Wright
  
- SLR International Corporation
  - Kwesi Brown
  - David Sullivan
  - Emily Foster
  - Mohamed Aguib
  
- FHI Studio
  - Marcy Miller
  - Stephanie Brooks
  
- Capitol Region Council of Governments (CRCOG)
  - Roger Krahn
  - Cara Radzins
  - Mike Cipriano

## 2. Meeting Presentation

Kwesi Brown, Project Manager for SLR, welcomed everyone to the first stakeholder meeting for the Farmington Area Connectivity (FAC) Study. He asked that everyone on the virtual meeting call introduce him/herself, and presented the attached agenda.

Roger Krahn, is CRCOG Project Manager, and explained that this study is part of CRCOG's Unified Work Program approved by CTDOT. He noted that CRCOG selected the SLR team using CTDOT's qualifications-based selection process, to complete the work outlined in this project scope of services.

Russ Arnold, of Farmington, described prior studies conducted in the area. He stated that the Route 4 Corridor Study which was completed in 1994 proposed a bridge to connect to Brickyard Road. Many people within the Town were not comfortable with the recommendations included in the 1994 Corridor Study. Since then, traffic has increased significantly on Route 4 and a lot of work has been done to improve the traffic conditions. In 2011, there were several large storms and Route 177 was nearly closed because of the Farmington River water levels at the truss bridge. That incident illuminated the need for another north-south bridge over the Farmington River. He continued that the Town supports a new connection near Monteith Drive because it is the narrowest point in the Farmington River and would connect the Farmington High School, Town Hall, and Library; to the Farmington Police Department and Senior Center. Environmental impacts for the new bridge are minimal. A big benefit is that the new bridge will pull traffic out of Farmington Center and Unionville Center. Russ Arnold stated that the Town of Farmington has already completed a preliminary design for the new bridge which preceded this Farmington Area Connectivity (FAC) Study. While the FAC study is a regional study, the Town of Farmington is also looking at turning lanes at the intersection of Route 4 and Monteith Drive to improve Farmington Avenue (Route 4). The Town of Farmington is greatly committed and looking forward to getting the study completed.

K. Brown reviewed the scope of the study, using the attached document showing 10 slides. He displayed a study area graphic to the attendees, noting that impacts to 26 intersections will be reviewed as part of the study. The 26 intersections were selected based on CRCOG's initial results of their travel demand model showing these intersections resulted in an increase or decrease of traffic volume, of more than 100 vehicles in a 3-hour morning or afternoon peak hour period. All municipalities and Councils of Governments that included any of these 26 intersections (Avon, Bristol, Burlington, Plainville, Naugatuck Valley COG, and Northwest Hills COG) were invited to this meeting. He displayed a project approach infographic that listed seven tasks in the scope of work that will be completed by this team. They include: 1) project management, 2) public outreach, 3) data collection, 4) existing conditions analysis, 5) future conditions analysis, 6) alternatives analysis, and 7) project purpose and need.

K. Brown stated that Task 1's major deliverables, the kickoff meeting and project management plan, are completed. Regarding Task 2, he said that this is the first of five stakeholder meetings, and the team plans to host one public information meeting during the study, and will seek endorsement of the project from the Farmington Town Council. The traffic counts as part of Task 3 and 4 have been collected. CRCOG is calibrating their Travel Demand Model using to turning movement counts and will then run the model to obtain projected future year traffic volumes for both build and no-build scenarios. The team is in the process of setting up the Synchro network. Tasks 5 and 6 will involve developing and analyzing future alternatives. The team will develop a Purpose and Need Statement as part of Task 7 and

will measure the alternatives against the Purpose and Need Statement considering the resiliency of the regional transportation system.

K. Brown stated that the team is aware of the required permits and is coordinating with CTDOT Office of Environmental Planning. Additionally, the SLR team will coordinate with the Lower Farmington River and Salmon Brook Wild & Scenic Committee as part of this study. He stated the Town of Farmington has expressed that they would like to get the study finished as soon as possible so that funding can be programmed for the project. He stated that the project team will work to be effective and efficient to get the study done within the 6-month timeframe. To date, SLR has been hitting the FAC study schedule and milestones and hope to complete the final report by April 2022.

### 3. Discussion

Stephanie Brooks, of FHI Studio, stated that if there will be property acquisitions, the study team should coordinate with those owners early in the process.

R. Krahn stated that CRCOG is calibrating the model using 2050 future year volumes.

R. Krahn stated that the project team is not considering other bridge locations as part of this study. He also clarified that the team is not preparing improvement plan concepts for the 26 intersections as part of this study. The team is simply looking at the effects of regional traffic volumes the future alternatives on them.

Hiram Peck, of Avon, asked whether the National Park Service Wild and Scenic River Act would be considered. K. Brown answered that it would and that the team will be looking to meet with the CTDEEP, NPS, or Lower Farmington River and Salmon Brook Wild & Scenic Committee, as part of this.

H. Peck also asked how the current traffic counts compare to pre-COVID counts. Will there need to be adjustments? R. Krahn answered that the team is calibrating the travel demand model now using the turning movement counts.

R. Krahn added his contact information to the chat. It is 860-724-4215 and [rkrahn@crcog.org](mailto:rkrahn@crcog.org).

### 4. Next Steps

K. Brown stated that the project team will next begin to schedule the remaining stakeholder meetings.

K. Brown contact information is 475-244-2277, [kabrown@slrconsulting.com](mailto:kabrown@slrconsulting.com)

Prepared by: Kwesi Brown, SLR Consulting

## Report of Meeting

Event: Stakeholder Meeting #2 – Farmington Emergency and Educational Services

Date and Time: Wednesday, December 15, 2021, 9:00 AM (via Microsoft Teams)

### 1. Attendees:

- Town of Farmington
  - Russell Arnold, P.E. – Director of Public Works/ Town Engineer
  - Steven Hoffmann – Director of Fire and Rescue Services
  - Sam Kilpatrick – Board of Education
  - Paul Melanson – Chief of Police
  - Shannon Rutherford, P.E. – Town Planner
- CT Department of Transportation (CTDOT)
  - Obesebea Aye-Addo – Traffic Department
  - Shraddha Joshi – Project Development Department
  - Grayson Wright – Bureau of Policy and Planning
- SLR International Corporation
  - Kwesi Brown
  - David Sullivan
  - Emily Foster
- FHI Studio
  - Stephanie Brooks
- Capitol Region Council of Governments (CRCOG)
  - Roger Krahn
  - Cara Radzins
  - Mike Cipriano

### 2. Meeting Presentation

Roger Krahn, CRCOG Project Manager, welcomed everyone to this second stakeholder meeting for the Farmington Area Connectivity (FAC) Study. He asked that everyone on the virtual meeting call introduce him/herself and presented the attached agenda.

R. Krahn explained that the scope of this project includes examining regional transportation traffic volume impacts and stakeholder engagement, noting that the first stakeholder meeting was with surrounding towns to introduce the project, along with today's second meeting, which will be followed by a third meeting tomorrow (December 16, 2021) with various environmental groups and agencies, including the Lower Farmington River and Salmon Brook Wild and Scenic Committee. Next steps include development of a Purpose and Need document that will help guide the project as it moves forward with funding into environmental phases.

Russ Arnold, of Farmington, added that the main reason for the project is to alleviate traffic, noting that the proposed bridge is at the narrowest river crossing, as opposed to previous studies where the project was at the widest crossing and had too many impacts. The bridge would connect Town Hall campus, the library, police station, and the high school on Route 4, to New Britain Avenue and various commercial districts, making the entire area more accessible. Environmental impacts for the new bridge are minimal, as there are no bridge structures in the river waterway or in the floodplain. In 2011, there were several large storms and Route 177 was nearly closed because of the Farmington River water levels at the truss bridge. That incident illuminated the need for another north-south bridge over the river.

K. Brown reviewed the scope of the study, using the attached document showing 10 slides, noting that the goal of today's meeting was to hear from Town officials about their feedback on the scope. He displayed a study area graphic to the attendees, noting that impacts to 26 intersections will be reviewed as part of the study. The 26 intersections were selected based on CRCOG's initial results of their travel demand model showing these intersections resulted in an increase or decrease of traffic volume, of more than 100 vehicles in a 3-hour morning or afternoon peak hour period. He added that all municipalities and Councils of Governments that included any of these 26 intersections (Avon, Bristol, Burlington, Plainville, Naugatuck Valley COG, and Northwest Hills COG) were invited to the first stakeholder meeting which took place in November 2021. He then displayed a project approach infographic that listed seven tasks in the scope of work that will be completed by this team. They include: 1) project management, 2) public outreach, 3) data collection, 4) existing conditions analysis, 5) future conditions analysis, 6) alternatives analysis, and 7) project purpose and need.

K. Brown stated that Task 1's major deliverables, the October 2021 kickoff meeting and project management plan, are completed. Regarding Task 2, he said that this is the second stakeholder meeting, followed by a third on December 16, followed by a public information meeting, and seeking endorsement of the project from the Farmington Town Council. The traffic counts as part of Task 3 have all been collected. Crash data analysis is ongoing, and the team just completed an existing conditions capacity analysis and will be sharing this information with the Town and CRCOG. All this information is going into the CRCOG Travel Demand Model that will be used to obtain a projected 2050 scenario of traffic volumes for both build and no-build scenarios, and a scenario that models the Route 177 bridge out of commission with the new bridge in place, and another scenario that models the Route 177 bridge out of commission without the new bridge in place. He then shared that the traffic Levels of Service (LOS) analysis has just been completed, and will be provided to the Town, CRCOG and CTDOT for review. Task 4 will involve developing alternatives, with a review of preliminary concepts, including intersection and multimodal improvements in the vicinity of the new bridge. These concepts will be refined per input from stakeholders and the public, and summary report will be prepared. Task 5 will involve development of a preliminary Purpose and Need Statement, to be conducted and documented as part of a PEL (Planning and Environment Linkages) process for reference into the NEPA (National Environmental Policy Act) process. This Purpose and Need Statement will be used to advance the project into NEPA and help to advance project funding. Permitting will also take place during this stage, along with environmental agency coordination. Task 6 will involve development of a final report summarizing all project findings and analysis.

K. Brown stated that the team is aware of the required permits and CTDOT Project Development Unit has coordinated with CTDOT Office of Environmental Planning (OEP) and received an initial review of the project from OEP. Additionally, the SLR team will coordinate with the Lower Farmington River and Salmon Brook Wild and Scenic Committee as part of this study and will be meeting with them tomorrow (December 16, 2021) along with the National Park Service and Farmington River Watershed Association. He stated the Town of Farmington has expressed that they would like to get the study finished as soon as possible so that funding can be programmed for the project, and that the project team will work to be effective and efficient to get the study done within the 6-month timeframe. To date, SLR has been hitting the FAC study schedule and milestones and hope to complete the final report by April 2022.

### 3. Discussion

R. Arnold then detailed more about the proposed bridge location using the project rendering in the presentation, adding that a preliminary design for this bridge began in 2015/2016. He pointed out proposed left and right turning lanes onto Route 4 and Monteith Drive, with two lanes traveling up towards the high school, Town Hall campus, senior center, and police station. He added that the new construction will also include crosswalks and right and left turning lanes onto New Britain Avenue. The preliminary concept plans for the proposed bridge, completed in 2018, shows no permanent bridge foundation structure within the banks of the Farmington River, which will mitigate the amount of permitting needed. Questions remain about the need for signals at New Britain Avenue and Monteith Drive, along with how to best coordinate with the new high school construction.

Sam Kilpatrick (Farmington Board of Education) asked about project timing, and whether the project construction will be timed with the construction of the high school in 2025.

R. Arnold responded that the project timing is dependent upon funding resources. The goal is to align with high school construction, but this is not guaranteed.

S. Kilpatrick added that the project would ultimately be good for the school district, as it will alleviate traffic and improve school response times.

Steven Hoffmann (Director of Farmington Fire and Rescue Services) thanked the team for the presentation and stated that this project is a win-win for the community, as it improves emergency vehicle access, alleviates congestion, and provides critical access to New Britain Avenue. He stated that he did not see any negative aspects to this project.

Paul Melanson (Farmington Chief of Police) stated that he is a big proponent of this project and has been pushing for it for some time. The project will help alleviate local traffic and the traffic in surrounding communities, as well as providing improved access during emergencies. He added that the high school is a primary shelter during emergencies, noting that during a recent flooding event, members of the public had a difficult time getting to the high school because of lack of access. This new bridge will help improve access to the high school. Improved access will also improve police response times, particularly given the number of ongoing school shootings and threats throughout Connecticut

and the nation. Timely police response is critical in today's environment and this new bridge will be a key public safety element.

R. Arnold also added that with the new higher bridge elevation, the Town does not see bridge access being an issue during a flood situation.

S. Kilpatrick asked about construction impacts, and the tradeoffs from construction inconvenience vs. the benefits of improved access once the new bridge is complete. He specifically referenced previous work on Route 4 reconstruction.

R. Arnold replied that no one wants to be inconvenienced by construction, but that the benefits will be worth the inconvenience, adding that the Town will work to mitigate as many negative construction impacts as possible.

P. Melanson added that in his thirteen years working in the community he can attest that the public usually takes a positive attitude towards construction improvements, especially if they can understand and see the benefits. He also specifically referenced previous work on Route 4 reconstruction.

R. Arnold agreed that people will see the benefits of a year of disruption. In addition, this bridge construction will have little impact on traffic, as the Town envisions the bridge being built on the New Britain Avenue side of the river where there is less traffic disruption, and all roadway widening being done offline at the shoulder. Monteith Drive is being reconstructed as part of the new high school project (S. Hoffmann confirmed this), so traffic in that area will be minimal as well.

P. Melanson asked if roundabouts are being considered for the new intersection at Monteith Drive.

K. Brown responded that the design team is looking at all potential concepts and will refine. He noted that roundabouts are expensive and have a large footprint, but it will be analyzed regarding its various costs and impacts, and then determine what works best for that location.

R. Krahn added that a roundabout is a good alternative to review. R. Arnold noted that the Town has been considering them as well. P. Melanson referenced all the green space which could be used to create the roundabout, along with the benefit of people not being able to run traffic lights.

R. Arnold asked R. Krahn if it would be possible for the Board of Education, Police Department and Fire and Rescue Services to provide letters of support for the project, which would help move the project forward. R. Krahn responded affirmatively, noting that documented support is an important part of setting up the environmental process, along with documenting public engagement, as part of NEPA requirements. Formal documented support would also be very helpful in soliciting Federal funding.

S. Kilpatrick inquired about the upcoming third stakeholder meeting, and R. Krahn responded that on December 16 the team is meeting with the National Park Service and the Lower Farmington River and Salmon Brook Wild and Scenic Committee to help get the environmental process off the ground and

review the project with them. K. Brown added that after the team further refines the proposed concept, it would be helpful to have another stakeholder meeting to present findings and solicit input on the proposed concept plans. In addition, there will be a Public Information Meeting and final presentation to the Town Council. These letters of support will be very helpful to share with the Town Council.

S. Kilpatrick noted that he will provide this meeting's presentation to the Board of Education superintendent. K. Brown will distribute the presentation to all meeting participants.

R. Arnold added that he could spearhead an additional meeting with the Board of Education to facilitate any additional questions or concerns they might have to help move the project forward. Participants concurred with this idea.

R. Arnold asked Grayson Wright (CTDOT) if he had any comments from the DOT perspective. G. Wright responded that studies such as the Farmington Area Connectivity Study are very helpful for CTDOT to have, to be able to help move them forward into implementable projects. He added that CRCOG projects are vetted by CTDOT to be sure have resources available (funding, staff resources, etc.) He expressed appreciation that this study and other CRCOG studies like it are being openly communicated to CTDOT at study onset, so that the DOT can work as a project partner with both CRCOG and the Town of Farmington.

#### 4. Next Steps

R. Krahn concluded the meeting by stating that CRCOG will have the future scenario transportation model results available shortly, and will send it to SLR, CTDOT, and Farmington. He added that as SLR has completed the existing conditions report, the project is moving along well. R. Arnold concurred that he was pleased to see the project moving forward.

The stakeholder meeting was then concluded.

K. Brown contact information is 475-244-2277, [kabrown@slrconsulting.com](mailto:kabrown@slrconsulting.com)

R. Krahn contact information is 860-724-4215, [rkrahn@crcog.org](mailto:rkrahn@crcog.org).

Prepared by: Kwesi Brown, SLR Consulting

#### **Attachments:**

Meeting Agenda  
Site Map  
PowerPoint slides

## Report of Meeting

Event: Stakeholder Meeting #3 – Environmental Agencies and Organizations

Date and Time: Thursday, December 16, 2021, 11:00 AM (via Microsoft Teams)

### 1. Attendees:

- Town of Farmington
  - Russ Arnold, P.E. – Director of Public Works/Town Engineer
  - Shannon Rutherford, P.E. – Town Planner
  
- National Park Service
  - Elizabeth Lacy
  
- Lower Farmington River and Salmon Brook Wild and Scenic Committee
  - Sally Rieger
  
- Farmington River Watershed Association
  - Laura Hart
  - Aimee Petras
  
- CT Department of Transportation (CTDOT)
  - Shraddha Joshi
  - Marisa Pfaffinger
  - Grayson Wright
  
- SLR International Corporation
  - Mohamed Aguib
  - Kwesi Brown
  - Emily Foster
  
- FHI Studio
  - Stephanie Brooks
  
- Capitol Region Council of Governments (CRCOG)
  - Mike Cipriano
  - Roger Krahn

### 2. Meeting Presentation

Roger Krahn, CRCOG Project Manager, welcomed everyone to this third stakeholder meeting for the Farmington Area Connectivity (FAC) Study. He asked that everyone on the virtual meeting call introduce him/herself and presented the attached agenda.

R. Krahn explained that the scope of this project includes examining regional transportation traffic volume impacts and stakeholder engagement, noting that the first stakeholder meeting was with surrounding towns to introduce the project, a second meeting took place on December 15, 2021, with

the Farmington Board of Education and Emergency Services including Fire and Police. Today is the third stakeholder meeting to solicit input from key environmental groups and agencies. Next steps include a Public Information Meeting to receive feedback from the public, along with development of a Purpose and Need document that will help guide the project as it moves forward with funding into the environmental phase. A project of this size (approximately \$20M) requires Federal funding and all requirements from the Federal Highway Administration and NEPA (National Environmental Policy Act). All the activities being performed as part of this project will lay the groundwork for the NEPA process.

Russ Arnold, of Farmington, added that the main reason for the project is to alleviate traffic, noting that the proposed bridge is at the narrowest river crossing, as opposed to previous studies where the project was at the widest crossing and had too many impacts. The bridge would connect Town Hall campus, the library, police station, and the high school on Route 4, to New Britain Avenue and various commercial districts, making the entire area more accessible. Environmental impacts for the new bridge are minimal, as there are no bridge structures in the river waterway. In 2011, there were several large storms and Route 177 was nearly closed because of the Farmington River water levels at the truss bridge. That incident illuminated the need for another north-south bridge over the river.

R. Arnold then detailed more about the proposed bridge location using the project rendering in the presentation, adding that a preliminary design for this bridge began in 2015/2016. He pointed out proposed left and right turning lanes onto Route 4 and Monteith Drive, with two lanes traveling up towards the high school, Town Hall campus, senior center, and police station. He added that the new construction will also include crosswalks and right and left turning lanes onto New Britain Avenue. He noted that there is no proposed bridge or roadwork directly in the Farmington River.

Kwesi Brown reviewed the scope of the study, using the attached slides, noting that the goal of today's meeting was to hear from Town officials about their feedback on the scope. He displayed a study area graphic to the attendees, noting that impacts to 26 intersections will be reviewed as part of the study. The 26 intersections were selected based on CRCOG's initial results of their travel demand model showing these intersections resulted in an increase or decrease of traffic volume, of more than 100 vehicles in a 3-hour morning or afternoon peak hour period. He added that all municipalities and Councils of Governments that included any of these 26 intersections (Avon, Bristol, Burlington, Plainville, Naugatuck Valley COG, and Northwest Hills COG) were invited to the first stakeholder meeting which took place in November 2021. Twenty of these intersections are signalized, and six are unsignalized. He added that this project is building on previous work completed, and that the team has completed data collection and existing conditions analysis and are now looking at future conditions of a new bridge. These elements will be used to develop a preferred alternative, and a final Purpose and Need document will be developed that can be moved into the NEPA process and receive federal funding. Additionally, stakeholder engagement and public outreach are a key element of this project to get buy-in and move the project forward into the environmental process.

He then displayed a project approach infographic that listed seven tasks in the scope of work that will be completed by this team. They include: 1) project management, 2) public outreach, 3) data collection, 4)

existing conditions analysis, 5) future conditions analysis, 6) alternatives analysis, and 7) project purpose and need.

K. Brown stated that Task 1's major deliverables, the kickoff meeting and project management plan, are completed. Regarding Task 2, he noted that this is the third stakeholder meeting, which will be followed by a public information meeting, and seeking endorsement of the project from the Farmington Town Council. The traffic counts as part of Task 3 have all been collected. Crash data analysis is ongoing, and the team just completed an existing conditions capacity analysis and will be sharing this information with the Town and CROG. All this information is going into the CROG Travel Demand Model that will be used to obtain projected traffic scenarios. CROG has completed the future scenario transportation model, will have results available shortly, and will send them to SLR. The scenarios under development include a projected 2050 scenario of traffic volumes for both build and no-build scenarios, and a scenario that models the Route 177 bridge out of commission with the new bridge in place, and another scenario that models the Route 177 bridge out of commission without the new bridge in place.

K. Brown then shared that the traffic Levels of Service (LOS) analysis has just been completed, and will be provided to the Town, CROG and CTDOT for review. Task 4 will involve developing alternatives, with a review of preliminary concepts, including intersection and multimodal improvements in the vicinity of the new bridge. These concepts will be refined per input from stakeholders and the public, with a resulting preferred bridge alternative and summary report. Task 5 will involve development of a preliminary Purpose and Need Statement, to be conducted and documented as part of a PEL (Planning and Environment Linkages) process for reference into the NEPA process. This Purpose and Need Statement will be used to advance the project into NEPA and help to advance project funding. Permitting will also take place during this stage, along with environmental agency coordination. Task 6 will involve development of a final report summarizing all project findings and analysis.

K. Brown stated that the team is aware of the required permits and CTDOT Project Development Unit has coordinated with CTDOT Office of Environmental Planning (OEP). He stated the Town of Farmington has expressed that they would like to get the study finished as soon as possible so that funding can be programmed for the project, and that the project team will work to be effective and efficient to get the study done within the 6-month timeframe. To date, SLR has been hitting the FAC study schedule and milestones and hope to complete the final report by April 2022.

K. Brown then provided additional bridge location details via the new bridge rendering shown in the presentation and noted that during yesterday's (December 15, 2021) second stakeholder meeting participants discussed a potential roundabout at of Monteith Drive. This study will look at a variety of intersection ideas to determine what makes most sense in the area. He reiterated that there would be no bridge footprint in the Farmington River, and that the bridge will be thirty feet higher than flood elevation, to protect against future flooding. Future coordination will take place with CTDOT OEP and environmental stakeholders such as today's participants, to determine the permitting needed.

R. Krahn added that one of the intents of study is to flesh out connectivity aspects for bicycle, pedestrian, and transit connections, with the concept shown on screen. If project advances, the project

team will need to do a full NEPA alternatives analysis including build, no-build, etc. The concepts shown today are basically fleshing out concepts developed in 2015/2016 as R. Arnold mentioned; this is not a full-blown project analysis. Identification of project resources, etc. will occur under the NEPA process.

K. Brown added that the next step of this meeting is to hear from today's participants, and he referenced that project would need to undergo a Section 7 process as determined by the National Park Service, and that getting as much preliminary information as possible now will help the environmental phase move smoothly in the future.

### 3. Discussion

Sally Rieger (Lower Farmington River and Salmon Brook Wild and Scenic Committee) stated that she would defer to Elizabeth Lacy (National Park Service) to discuss further, as the National Park Service will be ultimately responsible for the Section 7 process.

L. Lacy thanked the project team for the very informative presentation and for the opportunity to discuss this project early in the process, noting that the National Park Service works hand in hand with the Lower Farmington River and Salmon Brook Wild and Scenic Committee on local project analysis. She added that as the new bridge will not be touching the bed or banks of the Farmington River, the project may not require an Army Corps of Engineer permits. Army Corp permitting is what usually leads to the requirement for a Section 7 review (as part of the Wild and Scenic Rivers Act). However, a full Section 7 review will be required for this project because it will be using Federal funding. The Park Service would also want to receive input about any Federal permits being received and will also need to coordinate with Connecticut Department of Energy and Environmental Protection (DEEP) on the permitting that DEEP will be responsible for. Ongoing coordination will also take place with the Wild and Scenic Committee and other local experts. L. Lacy requested that the project team keep the National Park Service updated as the project moves forward, and to reach out if they need any information. She suggested that the team have a targeted meeting to discuss further about the project location and various design elements, to inform the team early on about any outstanding issues that seem important, well before any permitting is required. She concluded by asking if the project team had any questions for the National Park Service.

R. Arnold thanked L. Lacy for all this input and added that the Town can send the National Park Service the preliminary design plan for them to review. He noted that part of locating the new bridge on such a narrow passage was to preclude any need to have bridge elements in the water.

L. Lacy added that the Town and project team may want to review the Lower Farmington Management Plan which was put into place after the Wild and Scenic Act designation. The Plan has a great deal of information about all the resources available to ensure a successful Section 7 review (*this information was provided by S. Rieger via email* and can be accessed at [lowerfarmingtonriver.org/stewardship-2/management-plan](http://lowerfarmingtonriver.org/stewardship-2/management-plan)). Additionally, the Town and project team can visit [rivers.gov/transportation](http://rivers.gov/transportation), a multi-agency website as part of the National Wild and Scenic Rivers System to learn more about requirements for projects that take place in Wild and Scenic areas. L. Lacy added that the National Park

Service is also concerned with the resources surrounding the Farmington River as well, including indigenous sites, wildlife resources, etc.

R. Krahn asked L. Lacy if bridge architectural elements and the aesthetic nature of the bridge is important to the Wild and Scenic Act and asked if bridge construction would require a full Environmental Impact Statement or an Environmental Assessment. L. Lacy responded that additional project information is needed before she can make this type of assessment, but that as conversations continue, they will all have a better idea of what type of NEPA action will be required.

Shannon Rutherford (Town of Farmington) asked L. Lacy how far outside the riverbank does the National Park Service have jurisdiction within the Wild and Scenic Act. L. Lacy responded that the immediate river area is usually the focus, but their review can go as far out as a quarter of a mile from the actual project site. This applies to tributaries as well. She added that the project team and the National Park Service should discuss further once all project site locations are determined, so that the Park Service can relay any concerns. She concluded by stating that the main stem of the Farmington River and all its tributaries are under Wild and Scenic Act jurisdiction for about a quarter-mile radius. S. Rutherford thanked L. Lacy for this useful information.

K. Brown suggested that the team host another stakeholder meeting with participants as the project moves further into developing alternatives. R. Krahn and R. Arnold concurred. R. Arnold added that CT DEEP should be invited to this additional stakeholder meeting. Meeting participants concurred. L. Lacy noted that any preliminary agency coordination that can be done now is good, so that all involved parties are working with the same information.

Aimee Petras (Farmington River Watershed Association) stated FRWA would like to be at these additional meetings, and that they are concerned about stormwater entering the river from the bridge location.

Marisa Pfaffinger (CTDOT) suggested that a parallel conversation with CT DEEP take place about these stormwater issues and suggested that the project could be discussed at one of CTDOT's interagency review meetings. R. Krahn concurred. R. Arnold added that thus far the Town does not see any direct stormwater discharge from the new bridge. A. Petras responded that her concerns were also with pre-construction tree removal, the adding of turf elements, and runoff during construction. R. Arnold clarified that he was referring to the built bridge and agreed that there will definitely need to be stormwater runoff mitigation during bridge pre-construction and construction phases.

#### 4. Next Steps

K. Brown thanked the group for a very productive and helpful meeting and looked forward to further communication and collaboration.

The stakeholder meeting was then concluded.

K. Brown contact information is 475-244-2277, [kabrown@slrconsulting.com](mailto:kabrown@slrconsulting.com)

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R. Krahn contact information is 860-724-4215, [rkrahn@crcog.org](mailto:rkrahn@crcog.org).

Prepared by: Kwesi Brown, SLR Consulting

**Attachments:**

Meeting Agenda  
Site Map  
PowerPoint slides

## Report of Meeting

Event: Stakeholder Meeting #4 – Transit Agencies and Organizations

Date and Time: Wednesday, February 16, 2022, 10:00 AM (via Microsoft Teams)

### 1. Attendees:

- Town of Farmington
  - Russ Arnold, P.E. – Director of Public Works/Town Engineer
  - Shannon Rutherford, P.E. – Town Planner
  
- Connecticut Transit (CT Transit)
  - Brian McLaughlin
  - Brian Siegel
  
- CT Department of Transportation (CTDOT)
  - Tyler Roth
  - Grayson Wright
  
- SLR International Corporation
  - Kwesi Brown
  - Emily Foster
  
- FHI Studio
  - Stephanie Brooks
  
- Capitol Region Council of Governments (CRCOG)
  - Mike Cipriano
  - Roger Krahn
  - Cara Radzins

### 2. Discussion

Roger Krahn, CRCOG Project Manager, welcomed everyone to this transit agency meeting for the Farmington Area Connectivity (FAC) Study. He asked that everyone introduce themselves and noted that the purpose of today's meeting is to get input about potential route benefits and/or changes due to the proposed new bridge and roadway alignments recommended by the FAC Study.

Emily Foster, of SLR Associates, shared and detailed two graphics of existing transit and bicycle and pedestrian trail facilities, both within a half-mile radius of the new proposed bridge and zoomed out to detail the entire study corridor.

Kwesi Brown, of SLR Associates, added that this is a regional study that includes 26 intersections, not just within Farmington but in neighboring towns. He added that the project team would like to find out from CT Transit and CTDOT any existing needs, deficiencies, and/or improvements to be considered as part of this study.

Brian McLaughlin, of CT Transit, noted that the main bus route in the study area is bus 66, and that there are no immediate plans to modify this route, as ridership is relatively low. He added that the only study that may have future impact to the area is CRCOG's Comprehensive Service Analysis (CSA), which included recommendations for realigning bus services in the New Britain/Bristol Division of CT Transit.

B. McLaughlin asked the project team whether buses would need to be rerouted over the new proposed bridge or was the focus on providing transit benefits due to reduced congestion resulting from adding an extra crossing along Route 177. K. Brown responded that the study team is looking at reducing traffic via the addition of the new bridge, as well as potential multi-modal improvements and new bus rerouting along the bridge if needed, if CT Transit recommended this.

K. Brown then asked if CT Transit was looking to reroute any buses onto the proposed bridge or add any bus shelters. B. McLaughlin responded that the CTDOT would need to determine any rerouting to be done, but that reduced congestion due to construction of the new bridge could potentially increase ridership and the appeal of public transit. He added that area bus shelters are installed and maintained by the Town of Farmington and are provided and placed based on ridership levels. Current ridership along Route 4 is not very high, which is why there are relatively few shelters.

Cara Radzins, of CRCOG, asked CT Transit if there were any service requests for New Britain Avenue. B. McLaughlin responded that a route was created a few years ago but it did not generate enough ridership so was discontinued. A potential route generator could result from increased access to the senior center, which is already within the ¼ mile radius of paratransit routes.

C. Radzins stated that rerouting bus 66 over the new bridge would omit a critical bus stop at the nearby Stop and Shop, which is heavily used, and should be retained. B. McLaughlin concurred and added that the most feasible idea would be to extend bus 503 up Route 177 into Unionville, and truncate bus route 66 in Unionville, and use the combined alignment of those two routes to serve passengers.

Russ Arnold, of Farmington, stated that the Town has not received any emails or calls from constituents requesting any changes or additions to bus routes in the area. He added that the biggest transit benefit of this Study will be the alleviation of congestion. Reduced congestion will help the bus route 66 travel smoothly through Farmington and may make bus ridership more appealing to potential new passengers. B. McLaughlin concurred that reduced congestion will be a significant benefit.

K. Brown confirmed with the group that there is not currently any interest in changing any bus routes, but there are potential alterations that may be referenced from CRCOG's CSA. Both K. Brown and B. McLaughlin noted that less congestion and the option of a second bridge will allow for more routing opportunities, fits into existing regional plans, and allows for more effective long-term planning.

K. Brown requested that C. Radzins send a link to the 2016 CRCOG CSA study (*Note: via email after the meeting*, C. Radzins responded that previous New Britain/Bristol Division route recommendations were developed by CRCOG's CSA in 2016, to suggest additional access to Unionville. Relevant to the

Farmington Connectivity Study, CRCOG recommends connecting the New Britain/Bristol Division of CT Transit to Farmington via Route 177, and that connection could add additional service within the study area [potentially to service New Britain Avenue]. Additional information can be found at <https://crcog.org/2016/05/comprehensive-transit-service-analysis>)

### 3. Next Steps

R. Krahn stated that if the CTDOT or CT Transit had any additional feedback that they want to give to the Farmington Connectivity Study team, to please email Cara, Kwesi, or himself, and the study team will incorporate it into their study report. He added that the team is currently finishing up traffic modeling and will be preparing for a Public Information Meeting in April 2022, with study completion taking place after that time. He concluded by noting that this project will provide a great deal of connectivity benefits, and hopefully opportunities for transit improvements.

R. Krahn then thanked the group for a very productive and helpful meeting and looked forward to further communication and collaboration.

The stakeholder meeting was then concluded.

K. Brown contact information is 475-244-2277, [kabrown@slrconsulting.com](mailto:kabrown@slrconsulting.com)

R. Krahn contact information is 860-724-4215, [rkrahn@crcog.org](mailto:rkrahn@crcog.org).

C. Radzins contact information is 860-724-4251, [cradzins@crcog.org](mailto:cradzins@crcog.org)

Prepared by: Kwesi Brown, SLR Consulting

### **Attachments:**

Existing Conditions: Multimodal Amenities within ½ Mile Radius

Existing Conditions: Regional Transit and Bicycle Routes

## Report of Meeting

Event: Stakeholder Meeting #5 – Connecticut Interagency Meeting

Date and Time: Friday, February 25, 2022, 2:00 PM (via Microsoft Teams)

### 1. Attendees:

- Town of Farmington
  - Russ Arnold, P.E. – Director of Public Works/Town Engineer
  - Shannon Rutherford, P.E. – Town Planner
  
- CT Department of Transportation (CTDOT)
  - Kevin Carifa – Office of Environmental Planning
  - Jason Coite – Office of Environmental Planning
  - Andrew Davis – Office of Environmental Planning
  - Marilyn Gould – Office of Environmental Planning
  - Shraddha Joshi – Project Development Unit
  - Marissa Pfaffinger – Project Development Unit
  
- CT Department of Energy and Environmental Protection (CT DEEP)
  - Matthew Gocłowski – Fisheries Division
  - Susan Jacobson – Land Water Resources Division, Western CT
  - William Sigmund – Land Water Resources Division, Eastern CT
  
- US Environmental Protection Agency (US EPA)
  - Nathan Margason – US EPA Region 1
  
- Federal Highway Administration (FHWA)
  - Emilie Holland – Environmental Protection, CT Division
  
- SLR International Corporation
  - Kwesi Brown
  - Emily Foster
  
- FHI Studio
  - Stephanie Brooks
  
- Capitol Region Council of Governments (CRCOG)
  - Mike Cipriano
  - Roger Krahn
  - Cara Radzins

### 2. Meeting Presentation

Roger Krahn, CRCOG Project Manager, welcomed everyone to this interagency meeting for the Farmington Area Connectivity (FAC) Study. He asked that everyone introduce themselves.

Kwesi Brown, of SLR Associates, shared a presentation detailing project purpose and need, study tasks being undertaken, previous stakeholder and agency engagement, and detailed aerial, plan, section and profile views of the proposed new bridge and various bike and bridge lanes over the Farmington River, bridge area flood plain and FEMA flood zone areas, and a list of key study milestone dates.

Russ Arnold, of Farmington, added that previous studies looked at bridge crossings in the widest part of the Farmington River, which had more environmental impacts, including wetlands. The current bridge design has the bridge foundation outside of the river streambanks and has minimal environmental impacts, compared to previous study designs.

R. Krahn provided some additional information about stakeholder outreach, noting that the study team has reached out to Town of Farmington Engineering, Board of Education & Emergency Services departments, adjacent Town planning and engineering staff, CTDOT Office of Environmental Planning, Lower Farmington River and Salmon Brook Wild & Scenic Committee, National Park Service, Farmington River Watershed Association, and CT Transit. He added that a Public Informational Meeting will take place in April 2022.

R. Arnold discussed Right of Way impacts, noting that the Town of Farmington has been in ongoing discussion and negotiation with the two affected property owners in the project area, one residential and one commercial. The Town is ready to move forward with purchasing the needed land, as to not hold up the project and help move it forward into the environmental/NEPA phase.

R. Krahn added that the study team's goal is to develop a project that can be programmed and funded by CTDOT and FHWA funding sources.

### 3. Discussion

Susan Jacobson, of CT DEEP, inquired if there is any fill located in the study area floodplain.

R. Krahn responded that the proposed bridge is outside of the riverbanks, however, estimates of fill quantities for the roadway approaches have not yet been undertaken. R. Arnold added that as there is no part of the bridge foundation structure in the water.

S. Jacobson asked if the study team has mapped any of the wetlands. R. Arnold and K. Brown responded that this mapping has not yet taken place.

S. Jacobson inquired about the time frame for moving the study forward. R. Krahn and R. Arnold responded that the study team is hoping to expedite any processes that can help the study move forward smoothly into the NEPA, design, and permitting process, which includes purchasing ROW property, developing a framework for a Purpose and Need statement, providing solid documentation of public involvement, and procuring formal Farmington Town Council support.

Marissa Pfaffinger, of CTDOT, shared with the group that part of the goal of this interagency meeting is to identify any "red flags" that agencies may be aware of that might show up in future design phases of

the project. This early identification would help the study team share documentation at a high level, so that the future project design team would be able to review these issues at a deeper level once the study moves into the design process.

K. Brown asked the group if reviewing previous plans for the region would be helpful for these agencies, and M. Pfaffinger responded positively that reviewing early plans would be helpful. The study team will provide these materials to the group.

S. Jacobson inquired if the study team has confirmed if the proposed bridge is in a Natural Diversity Data Base (NDDDB) Area and if so, what species are affected. K. Brown concurred that the study is in a NDDDB Area, but identification of species has not yet occurred. Both S. Jacobson and K. Brown concurred that early coordination with the NDDDB database will help confirm this.

M. Pfaffinger noted a similar Farmington River bridge project in Avon, Connecticut, but is a useful example to compare when agencies start getting involved in the review of this Farmington project, as there were impacted species and historic resources. Past participation and feedback from the Lower Farmington River and Salmon Brook Wild & Scenic Committee regarding viewsheds, etc. will also be an element to consider.

R. Arnold noted that this particular project is located in the narrowest part of the Farmington River, which provides less impacts since it is not in the waterway. R. Krahn added that when the study team met with the National Park Service and the Lower Farmington River and Salmon Brook Wild & Scenic Committee, they did not note any red flags that would be a major problem as the project moves forward. However, the project would need to undergo Section 7 of the Wild and Scenic Rivers Act. This may not require an Environmental Impact Statement, but resources and impacts will need to be fleshed out as part of an Environmental Assessment.

R. Krahn and Jason Coite, of CTDOT, noted that additional CTDOT staff to include in agency coordination are Grayson Wright and Marc McMillan.

Emilie Holland, of FHWA, asked for clarification of where the multi-use path will be located within the project area, and wanted to ensure that the study team does not propose to clear out wooded areas in between the trail and the new bridge. R. Arnold shared some detailed town maps and responded that there will be minimal clearing for access only. He added that about 10 – 15 years ago, the Town of Farmington had a River Access Committee that recommended river access via this type of multi-use path.

R. Arnold thanked all the agencies for participating and noted that this is a valuable study that will reduce traffic in Town centers and will provide needed connectivity; particularly high school recreational traffic to the Tunxis Mead athletic fields, improved EMT access, and help alleviate daily commuter traffic trying to access I-84. He added that in 2011 there was severe flooding in the area, and the existing truss bridge almost had to be shut down, requiring an extensive bypass route. This new bridge is proposed with a higher elevation to reduce floodway impacts and would allow for improved emergency access.

Nathan Margason, of US EPA, noted that from a broad view, this looks like a logical location for a bridge crossing and connecting core emergency services to key Town resources.

#### 4. Next Steps

K. Brown noted that if any of the agencies at this meeting have additional feedback, to please contact R. Krahn or M. Pfaffinger. He also noted that he will provide an updated presentation to R. Krahn for distribution to J. Coite and the CTDOT team and will provide previous Farmington Area plans to M. Pfaffinger as requested.

R. Krahn then thanked the group for a very productive and helpful meeting and looked forward to further communication and collaboration.

The stakeholder meeting was then concluded.

M. Pfaffinger contact information is 860-594-3358, [marissa.pfaffinger@ct.gov](mailto:marissa.pfaffinger@ct.gov)

R. Krahn contact information is 860-724-4215, [rkrahn@crcog.org](mailto:rkrahn@crcog.org)

K. Brown contact information is 475-244-2277, [kabrown@slrconsulting.com](mailto:kabrown@slrconsulting.com)

Prepared by: Kwesi Brown, SLR Consulting

#### **Attachments:**

CT Interagency Meeting Presentation

## Report of Meeting

### Event: Connecticut DOT Bridge Management Meeting

Date and Time: Friday, April 22, 2022, 12:30 PM (via Microsoft Teams)

#### 1. Attendees:

- Town of Farmington
  - Russ Arnold, P.E. – Director of Public Works/Town Engineer
  - Shannon Rutherford, P.E. – Town Planner
  
- CT Department of Transportation (CTDOT)
  - Jacob Booth – Bridge Management Unit
  - Shraddha Joshi – Project Development Unit
  - Marissa Pfaffinger – Project Development Unit
  - Grayson Wright – Bureau of Policy and Planning
  
- SLR
  - Kwesi Brown
  - Emily Foster
  - Shelley Plude
  
- FHI Studio
  - Stephanie Brooks
  
- Capitol Region Council of Governments (CRCOG)
  - Rob Aloise
  - Mike Cipriano
  - Roger Krahn
  - Cara Radzins

#### 2. Meeting Presentation

Roger Krahn, CRCOG Project Manager, welcomed everyone to this meeting for the Farmington Area Connectivity (FAC) Study, and asked that everyone introduce themselves. He noted that the main purpose of the meeting was to inform the Connecticut Department of Transportation (CTDOT) bridge unit about this FAC planning study, inquire about any red flags, and learn about the existing Route 177 bridge over Farmington and details about upcoming work being done on it. The study team is planning to host a public information meeting in June and wants to ensure that they have up to date information about any current bridge projects. R. Krahn added that this new bridge study recommends a Monteith Drive bridge extension and will add elements of resiliency to the existing local and regional transportation system.

Kwesi Brown, of SLR, shared a presentation detailing project purpose and need, location, and study tasks being undertaken; previous stakeholder and agency engagement, detailed aerial, plan, and profile views of the proposed new bridge and various bike and bridge lanes over the Farmington River;

environmental, historic, and cultural resources, bridge area flood plain and FEMA flood zone areas, and a list of key study milestone dates.

K. Brown added that the overall study builds on existing planning studies from 2018, assessing the benefits of a second connection over Farmington River, via traffic modeling of various scenarios. The study team sees several potential benefits including enhanced local and regional connectivity, bicycle, pedestrian and transit improvements, and improved emergency access. The team is currently developing a Purpose and Need statement that will allow the study to receive federal funding and allow the project to move forward into the NEPA process and through design and implementation. The new bridge will have touchdowns at Route 4 (Farmington Avenue) and Monteith Drive to the north, which includes the high school, library, and Town Hall; and will connect to New Britain Avenue to the south, which includes the police station and senior center.

### 3. Discussion

Russ Arnold, of Farmington, noted that the Town has been considering a new bridge at Monteith Drive for many years, particularly after extensive flood events that nearly caused a shutdown of the existing Route 177 bridge. This new bridge would not only provide easier access to the high school, which also serves as the town emergency shelter; and provide redundancy in case of future flooding events but will also ease traffic within the Town. R. Arnold added that the new bridge is of higher elevation and does not have any piers in the Farmington River, and that the Town Council provided funding for a preliminary design study in 2018 and looks forward to moving this study further into the NEPA process.

Jacob Booth, CTDOT, stated that this project will support the resiliency and connectivity efforts that are currently of interest to the Connecticut Department of Transportation. He suggested that the Purpose and Need Statement specifically include the improved emergency fire truck access and response time that a new bridge will provide. The existing Route 177 truss bridge cannot handle heavy fire truck traffic, and the new proposed bridge will provide critical access to these heavy fire trucks.

J. Booth then provided an overview of the existing Route 177 bridge and upcoming rehabilitation work planned. The bridge is currently in poor condition and is currently under extensive steel repair that should get the bridge up to a State of Good Repair. Once repair efforts are complete, the bridge should be up to state standards. CTDOT is also including full bridge repainting in the current rehabilitation project. CTDOT expects that after this repair, they will not need any major work on the bridge for approximately 15 to 25 years.

J. Booth then added that the existing Route 177 bridge is about 4 feet above 100-year flood event levels, and due to the increase of 100-year flood events, could flood again. FEMA is in the process of reevaluating flood levels, and the CTDOT is taking a closer look at the levels of increased flood frequency, which will eventually play a role in assessing new proposed bridge as well.

Marissa Pfaffinger, of CTDOT, and J. Booth then stated unofficially that this bridge study seems very favorable and a positive development for the region.

Shelley Plude, of SLR, then inquired if the study team had reached out to the National Park Service (NPS), to which R. Krahn answered in the affirmative, and that the NPS informed the team that the bridge will require a Section 7 Wild and Scenic Rivers regulatory process. No commitment has yet been made by CTDOT or FHWA as to the type of NEPA document that will need to be developed for this project. However, R. Krahn has offered a tentative assumption that it could be an Environmental Assessment. The project currently has a strong Purpose and Need statement that can help it move favorably into the NEPA process. Also beneficial will be the amount of agency and stakeholder outreach that has taken place, along with the upcoming traffic input report, public meeting, and formal Town endorsement. All of this will hopefully lead to a programmed project with federal funding.

R. Krahn noted that it seems very favorable that the CTDOT bridge group does not see any red flags about this new bridge, noting that the Town has picked out great location and that all the stakeholders engaged thus far have been supportive and aware of special environmental concerns.

Grayson Wright, of CTDOT, noted that in addition to the existing CTDOT study selection process and procuring early CTDOT buy in, there has been discussion about developing a smoother CTDOT implementation process and project phasing mechanism. G. Wright added that this new Farmington River bridge study is hopefully one of the studies that will benefit from this CTDOT enhanced phasing and implementation process.

#### 4. Next Steps

M. Pfaffinger requested an offline meeting with R. Krahn to discuss next steps. This meeting will take place shortly.

R. Krahn then thanked the group for a very productive and helpful meeting and added that FHI Studio will be developing a Report of Meeting which CRCOG will send to all meeting attendees.

The stakeholder meeting was then concluded.

R. Krahn contact information is 860-724-4215, [rkrahn@crcog.org](mailto:rkrahn@crcog.org)

K. Brown contact information is 475-244-2277, [kabrown@slrconsulting.com](mailto:kabrown@slrconsulting.com)

Prepared by: Kwesi Brown, SLR

#### **Attachments:**

Connecticut DOT Bridge Management Meeting Presentation

# CAPITOL REGION COUNCIL OF GOVERNMENTS FARMINGTON AREA CONNECTIVITY STUDY

## Presentation to Farmington Town Council

September 13, 2022

# PRESENTATION OUTLINE

- Project Background/History

*Russell Arnold, Jr., PE*

*Director/Town Engineer*

*Town of Farmington*

- Planning Study Introduction

*Roger Krahn, PE, RSP1*

*Principal Transportation Engineer*

*Capitol Region Council of Governments*

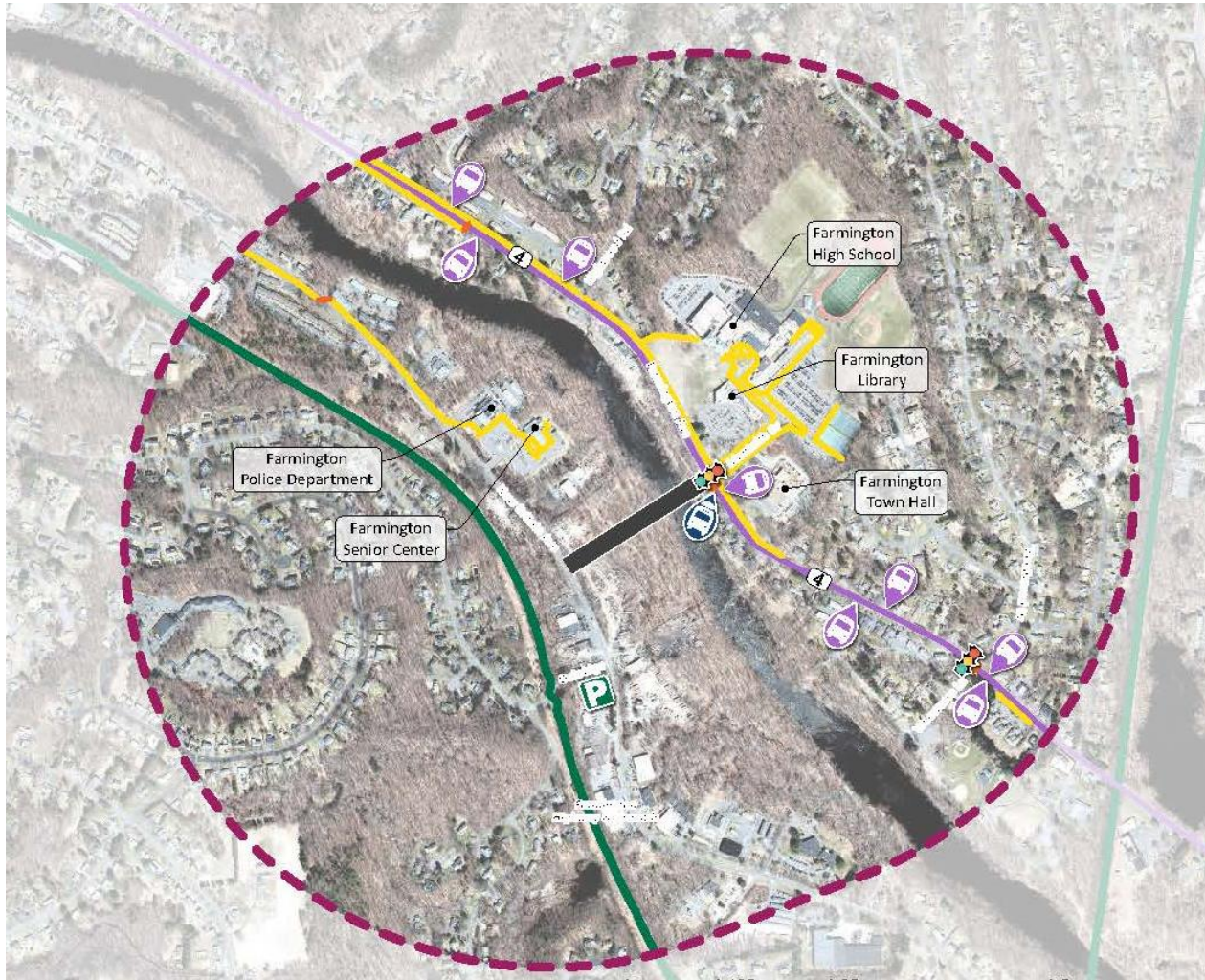
- Planning Study & Progress

*Kwesi Brown, PE, PTOE*

*Manager of Transportation Engineering*

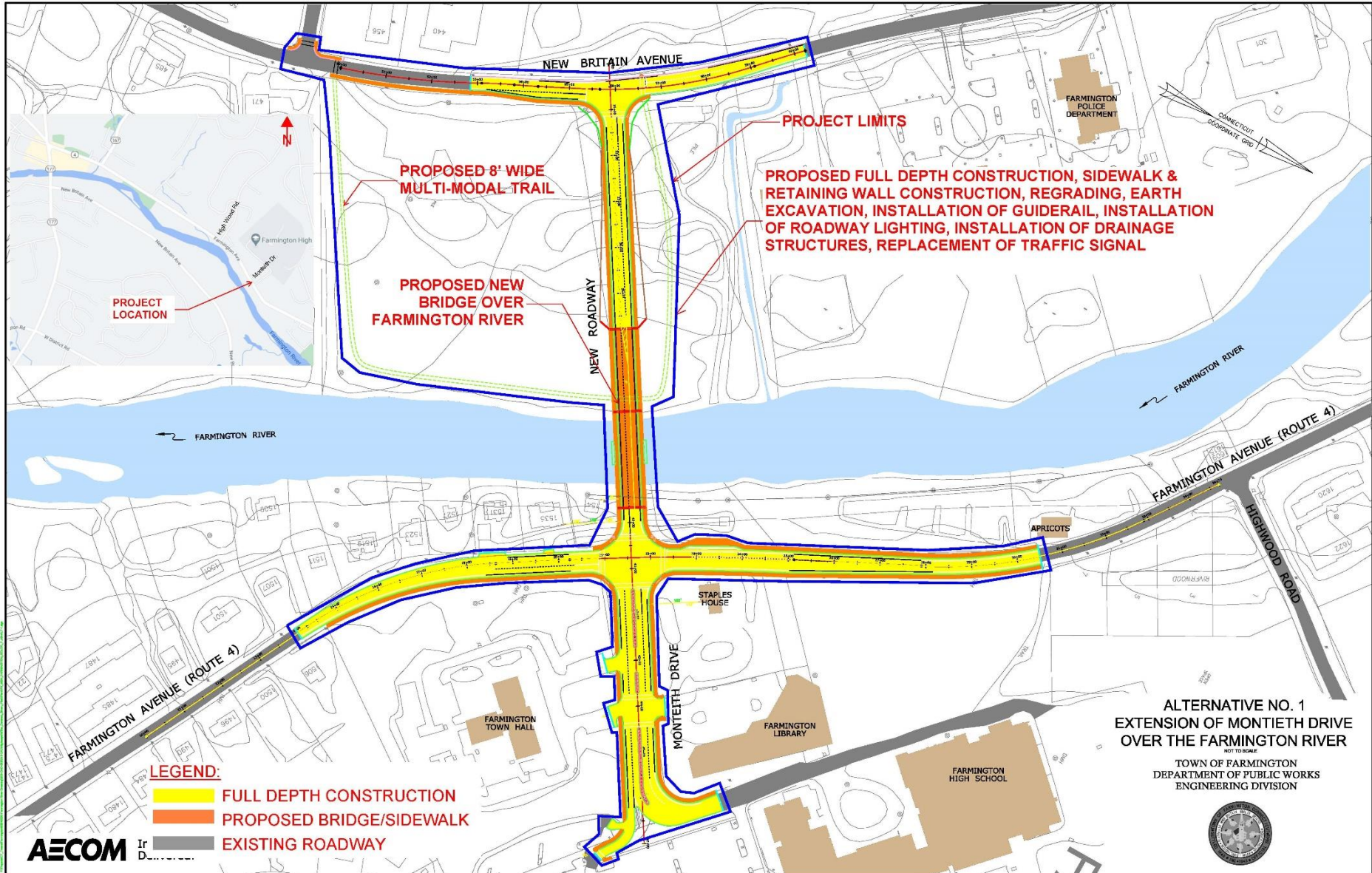
*SLR Consulting*

# LOCATION MAP





Monteith Bridge Rendering- 2018 Concept Plans by AECOM



ALTERNATIVE NO. 1  
 EXTENSION OF MONTEITH DRIVE  
 OVER THE FARMINGTON RIVER  
NOT TO SCALE  
 TOWN OF FARMINGTON  
 DEPARTMENT OF PUBLIC WORKS  
 ENGINEERING DIVISION



**AECOM** Inc.  
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## Monteith Bridge Rendering- 2018 Concept Plans by AECOM

global **environmental** and **advisory** solutions



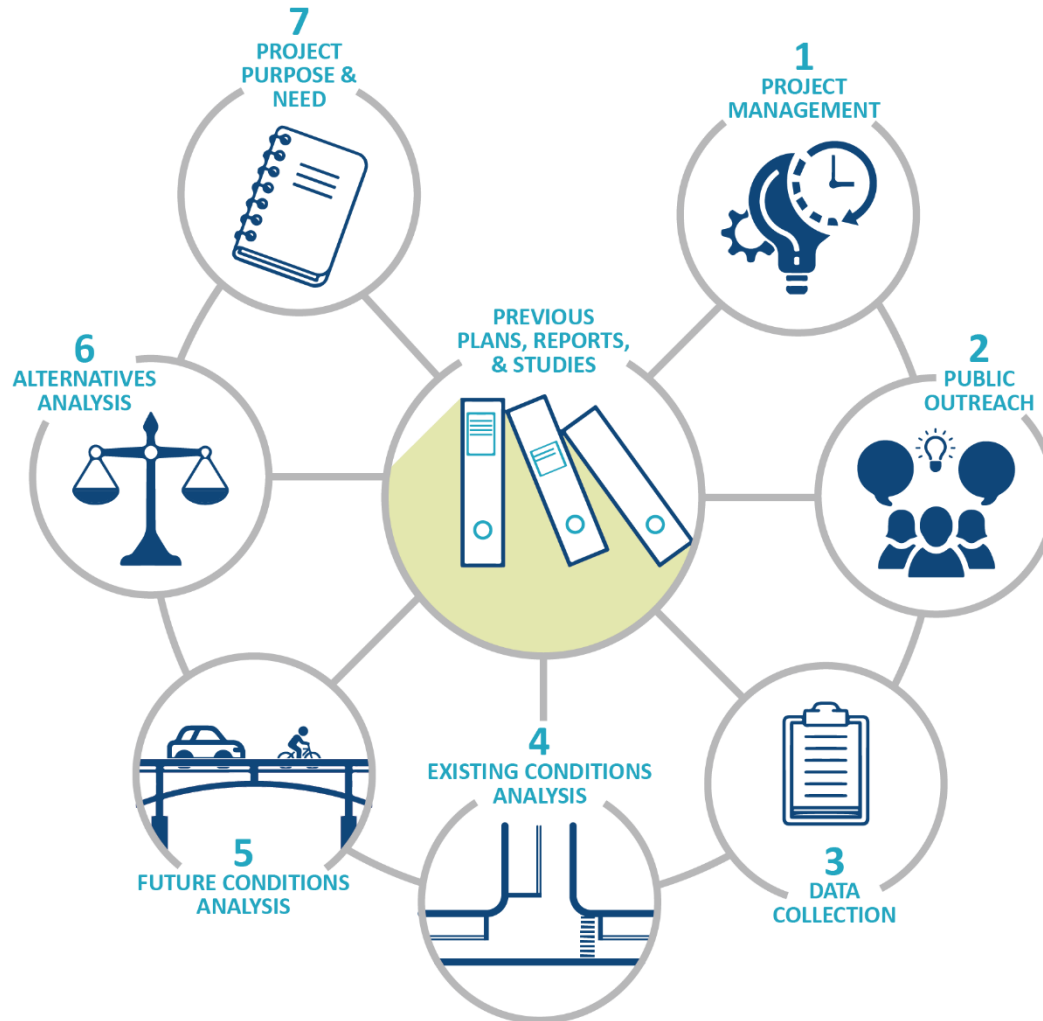
# CRCOG PLANNING STUDY TASKS

- Public Outreach & Stakeholder Engagement
- Traffic Analysis
- Intersection Preliminary Concept
  - New Bridge and Farmington Avenue
  - New Bridge and New Britain Avenue
- Develop Purpose & Need Statement
  - National Environmental Policy Act (NEPA)/CEPA process

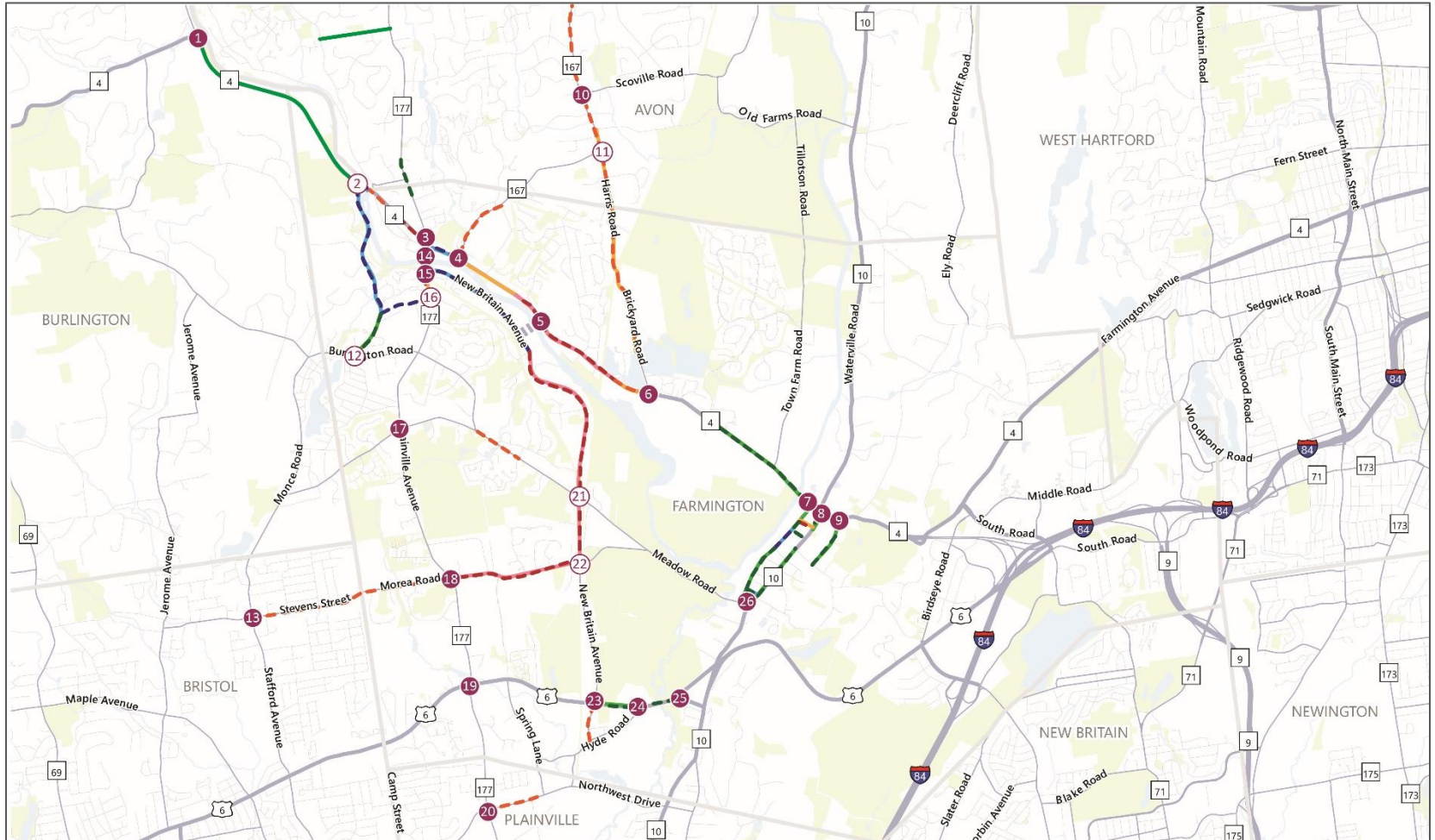
# STAKEHOLDER ENGAGEMENT

- Town of Farmington (Dec. 15, 2021)
  - Engineering, Board of Education & Emergency Services
- Adjacent Towns Planning and Engineering Staff (Nov. 18, 2021)
- Farmington Environmental – Various Agencies (Dec. 16, 2021)
  - Lower Farmington River and Salmon Brook Wild & Scenic Committee
  - National Park Service
  - Farmington River Watershed Association
- CT Transit (Feb. 16, 2022)
- CTDOT Interagency Environmental – Feb. 25, 2022
- Public Informational Meeting- TBD

# STUDY APPROACH

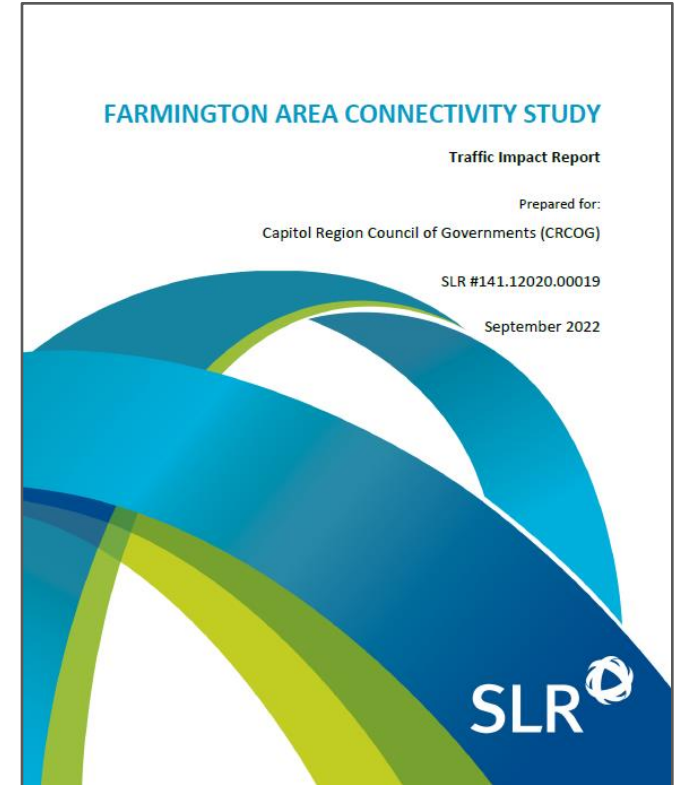


# TRAFFIC ANALYSIS- STUDY AREA

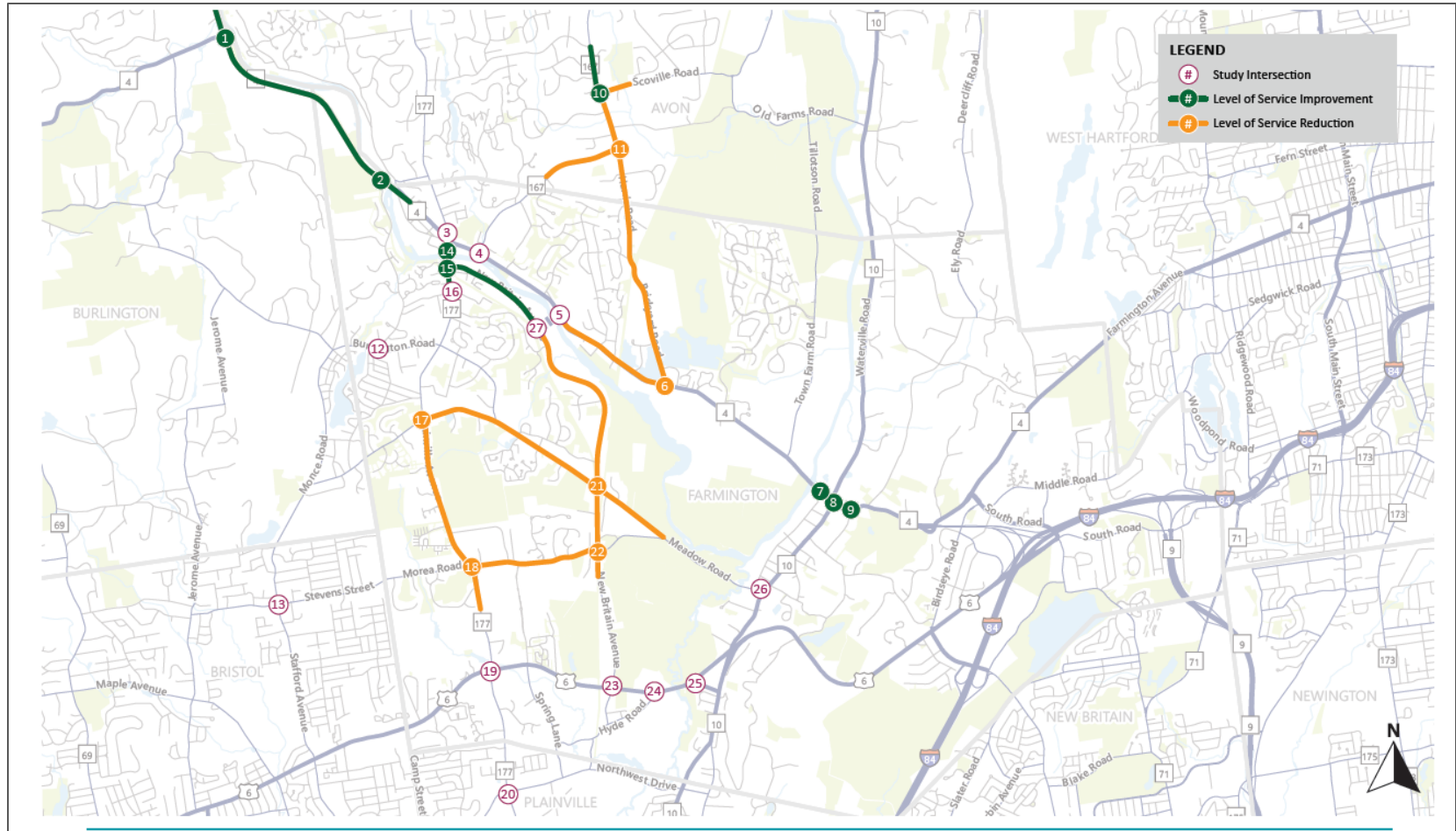


# TRAFFIC ANALYSIS – COMPLETED TASKS

- Traffic & Safety data collection
- Existing Conditions Analysis
- Future Conditions
  - No Build, Build, Existing Route 177 Bridge out of Service with New Bridge and without New Bridge



# TRAFFIC ANALYSIS - RESULTS



## NEXT STEPS

- Development of Alternatives at Connecting Intersections
  - Two Intersections
- Development of Study Project Purpose & Need Statement
  - Vehicle Connectivity (improve Farmington Avenue congestion)
  - Resiliency of Transportation System
  - Emergency Response from Police Station on south side of River
  - Pedestrian and Bicycle Connections
  - Transit Route Improvements

## STUDY KEY DATES

- Public Information Meeting – November 2022
- Final Study Report – December 2022

# QUESTIONS



## Report of Meeting

Event: Public Information Meeting

Date and Time: Wednesday, November 29, 2023, 7:00 PM

Location: Farmington Town Hall Council Chambers

### 1. Attendees:

Amy Palumbo

Bob Canto

Mike O'Brien

Christine Pescatore

CJ Thomas

Joseph Capodiferro, Town Council

Keith Vibert, Town Council

State Representative Mike Demicco

Russ Arnold, Town of Farmington Public Works Director/Town Engineer

Roger Krahn, Capitol Region Council of Governments (CRCOG)

Mike Cipriano, CRCOG

Kwesi Brown SLR International Corporation

Mohamed Aguib, SLR International Corporation

Marcy Miller, FHI Studio

### 2. Presentation (see attached 28 presentation slides)

Russell Arnold Jr. PE, of the Town of Farmington, introduced himself and members of the project team. He stated that the overall purpose of the meeting is to discuss potential Monteith bridge recommendations and get feedback on them from the public. He reviewed the agenda for the meeting, noting that there would be a short presentation and then an open discussion.

R. Arnold discussed the project background and history. He described the 1998 Route 4 Corridor Study and highlighted a proposed new bridge over the Farmington River near Brickyard Road, which was not well received by the Town. He stated that new concept plans were completed for a Monteith Drive crossing in 2018 by the engineering firm, AECOM. The bridge itself was envisioned to have three lanes and sidewalks on both sides, plus lookouts and benches. He spoke to a rendering, noting the benefits of connecting trails and the senior center. He noted the proposed crossing at Monteith Drive is at one of the narrowest sections of the river.

Roger Krahn, of CRCOG, discussed CRCOG's role as the Metropolitan Planning Organization in the Hartford Region and undertook this study with planning funds from CT Department of Transportation. The study is primarily a traffic analysis study to identify the anticipated

regional traffic volumes and operational effects resulting from the proposed bridge scenarios. The study also includes public and stakeholder outreach; and outlining the purpose and need for the proposed project to help advance a proposed project to the next phases. CROG hired the firm of SLR to perform the study. R Krahn added that there are several destinations in this area that would benefit from increased access from a bridge at Monteith Drive including the Town Hall, High School, and Library.

Kwesi Brown, of SLR Consulting, discussed the project approach and overall study area. He discussed the various stakeholder engagement that had been undertaken including a series of stakeholder meetings with such groups as Town Engineering staff, adjacent municipal staff, *CTtransit*, and environmental interest groups, as well as this public meeting.

He described the team's efforts to collect existing traffic count data, crash data, and multimodal transportation and facility information (e.g. bus routes and multiuse trails).

K. Brown discussed the traffic data collection process, noting that the team proposed to analyze 26 different intersections in the study area. He added that residents had voiced concerns that the new bridge would encourage vehicular cut-throughs via the Oak Ridge neighborhood. . The team responded by adding three more intersections into the traffic analysis to investigate this concern. K. Brown also presented crash data for the 2018-2021 study area period. He said that there were no fatalities on Farmington Avenue and one fatality on New Britain Avenue.

He described the regional travel demand model, which forecasts future traffic volumes in the community. He stated that the study team looked at four scenarios for future 2050 traffic volumes. They include:

- Scenario 1: No Build, with only the existing Route 177 bridge in place.
- Scenario 2: Build, with the proposed Monteith Drive bridge and the existing Route 177 bridge in place.
- Scenario 3: No Build, with Route 177 bridge out of service and without the proposed Monteith Drive Bridge.
- Scenario 4: Build, with the Route 177 bridge out of service and with the proposed Monteith Drive Bridge in place.

K. Brown presented detailed information for each of the four scenarios. He discussed Level of Service (LOS), noting that each intersection LOS is calculated in seconds of delay and given a letter grade ranging from A to F. A is considered free flow. F has long delays.

K. Brown stated that with a new bridge at Monteith Drive, there would be an improvement in LOS in the Unionville area, particularly at the Route 177 bridge. K. Brown also indicated that while the LOS will be acceptable in the vicinity of the Monteith Drive Bridge, there will most likely be a decline due to the anticipated increase in traffic in that area.

He also discussed the travel time runs that the team performed based on the cut through comments. He noted that in all three scenarios showed that going through the Oak Ridge neighborhood added an additional 1-5 minutes of travel time for drivers, therefore the Oak Ridge neighborhood would not be a desirable cut-through.

K. Brown discussed three preliminary alternatives for the new intersection configurations at both ends of a proposed bridge. Preliminary Alternative 1 includes roundabouts at both New Britain Avenue and Farmington Avenue. Preliminary Alternative 2 includes traffic signals at both intersections. Preliminary Alternative 3 includes a roundabout at New Britain Avenue and a traffic signal at Farmington Avenue. He added that a roundabout at Route 4 (Farmington Avenue) would need to include a double lane roundabout to have an acceptable LOS. No double lane roundabout currently exists in Connecticut. He discussed further findings including enhanced connections between landmark facilities and improved bicycle and transit access.

### 1. Discussion

Keith Vibert, of the Town Council, asked what would happen if drivers turn right from Red Oak onto Copper Mine to avoid traffic on New Britain Avenue. R. Arnold answered that if this movement did become a problem, the Town could consider methods to prohibit or discourage that traffic pattern. He added the Oakridge area could be a prime area for another roundabout.

An attendee asked if the study team had a preferred bridge alternative. R. Arnold answered that the Preliminary Alternative 3 is probably the preferred alternative, because of its limited right-of-way impact.

Mike O'Brien asked how the decision-making process would work. Would there need to be a referendum vote? R. Arnold answered that he did not believe a referendum vote would be needed, but the Town Council would determine that. M. O'Brien asked how the bridge could be funded. Would funding be different if it is considered a regional vs. a local bridge? R. Arnold answered that this would likely be considered a regional bridge, and it would hopefully get state and federal funding. Many agreed that there is a desire to limit the cost to Farmington taxpayers.

CJ Thomas stated that he appreciated the study team's efforts, including the review of the potential impacts from cut through traffic. He voiced support for a new bridge, noting the community connections, safety, and flooding benefits. Another attendee voiced support for Preliminary Alternative 3, particularly supporting a roundabout on New Britain Avenue.

An attendee asked if sidewalks would be improved along Route 4 with a new bridge. R. Arnold answered yes. Another attendee asked if improvements would include dedicated turn lanes on Farmington Avenue. R. Arnold answered that they would include turn lanes.

Another attendee questioned potential obstacles that may prevent a bridge from ultimately being constructed. R. Arnold answered that any federally or state funded improvements would need to go through environmental documentation, which would also include additional outreach and impacts analysis. R. Krahn stated that the team would continue to look for grants that can fund a new bridge. Another resident asked if there is anything that residents can do to expedite the process. R. Krahn answered that public support would be beneficial as the team goes through the documentation and design process. When asked about the timeframe, R. Arnold said that 8-10 years is probably a bit ambitious to get through environmental documentation, design, and construction. He added that this project is not on the State Transportation Improvement Program (STIP) at this time.



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# Public Information Meeting

Farmington Area Connectivity Study

Farmington, CT

Capitol Region Council of Governments

November 29, 2023





# Presentation Outline

## **Project Background / History**

Russell Arnold, Jr., PE  
Public Works Director/Town  
Engineer  
Town of Farmington

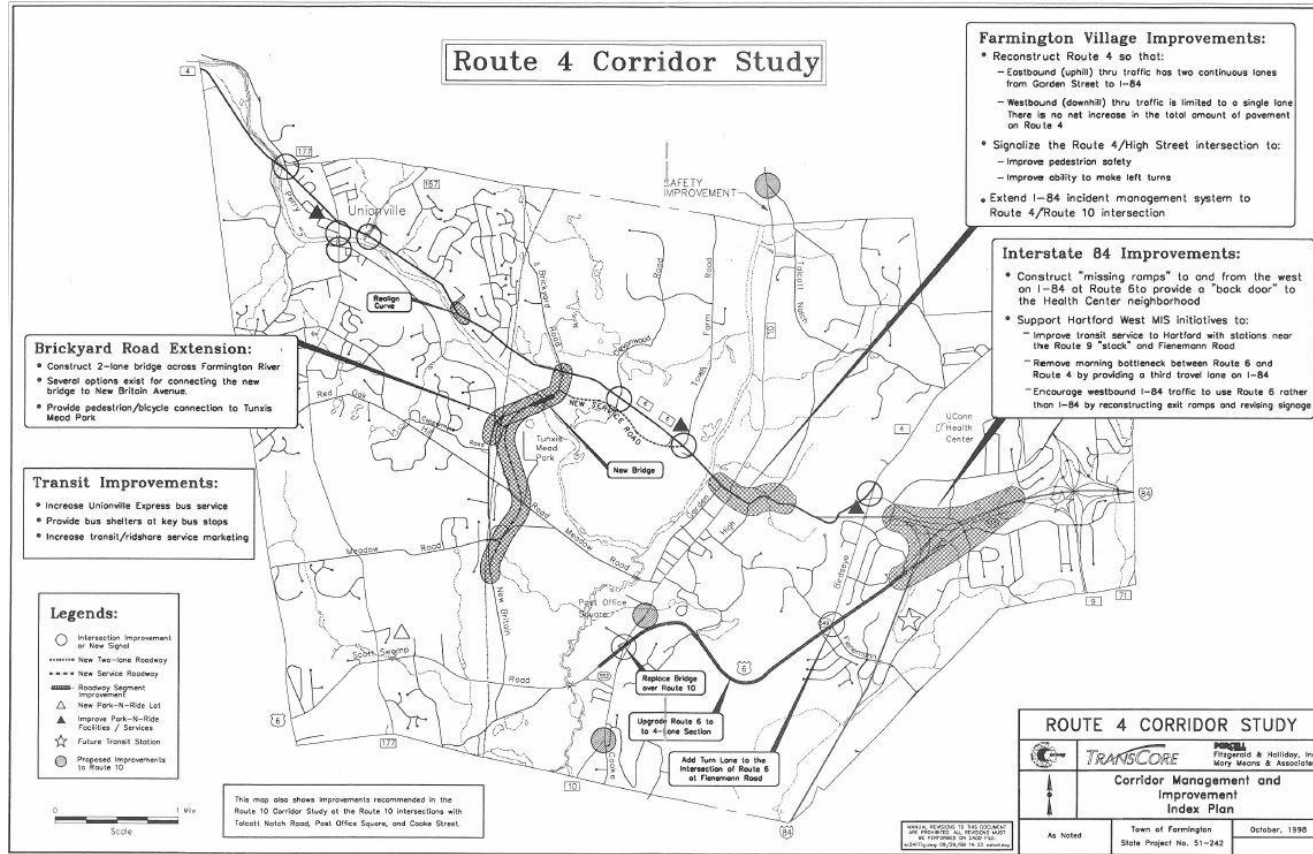
## **Planning Study Introduction**

Roger Krahn, PE, RSP1  
Principal Transportation  
Engineer  
Capitol Region Council of  
Governments

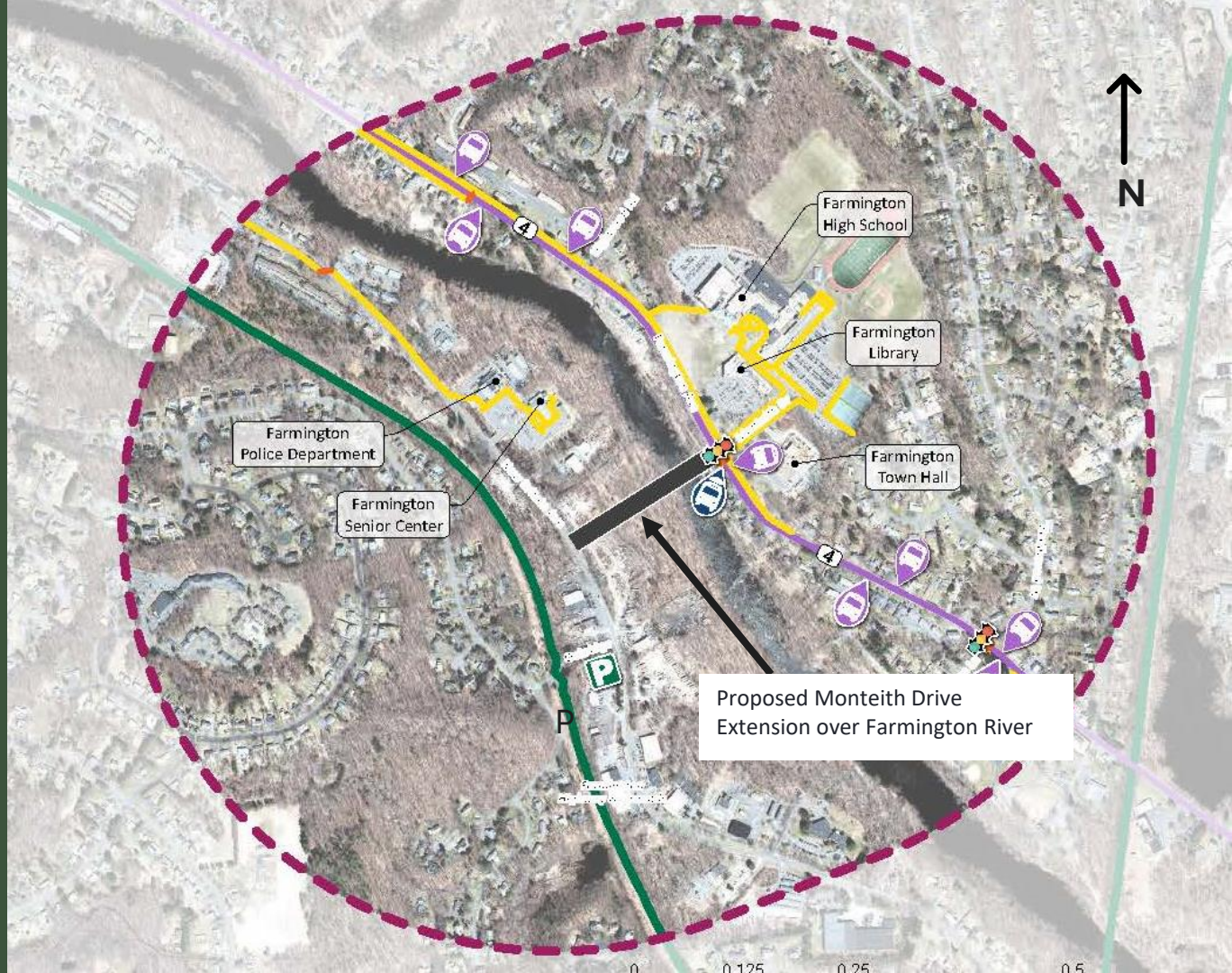
## **Planning Study & Progress**

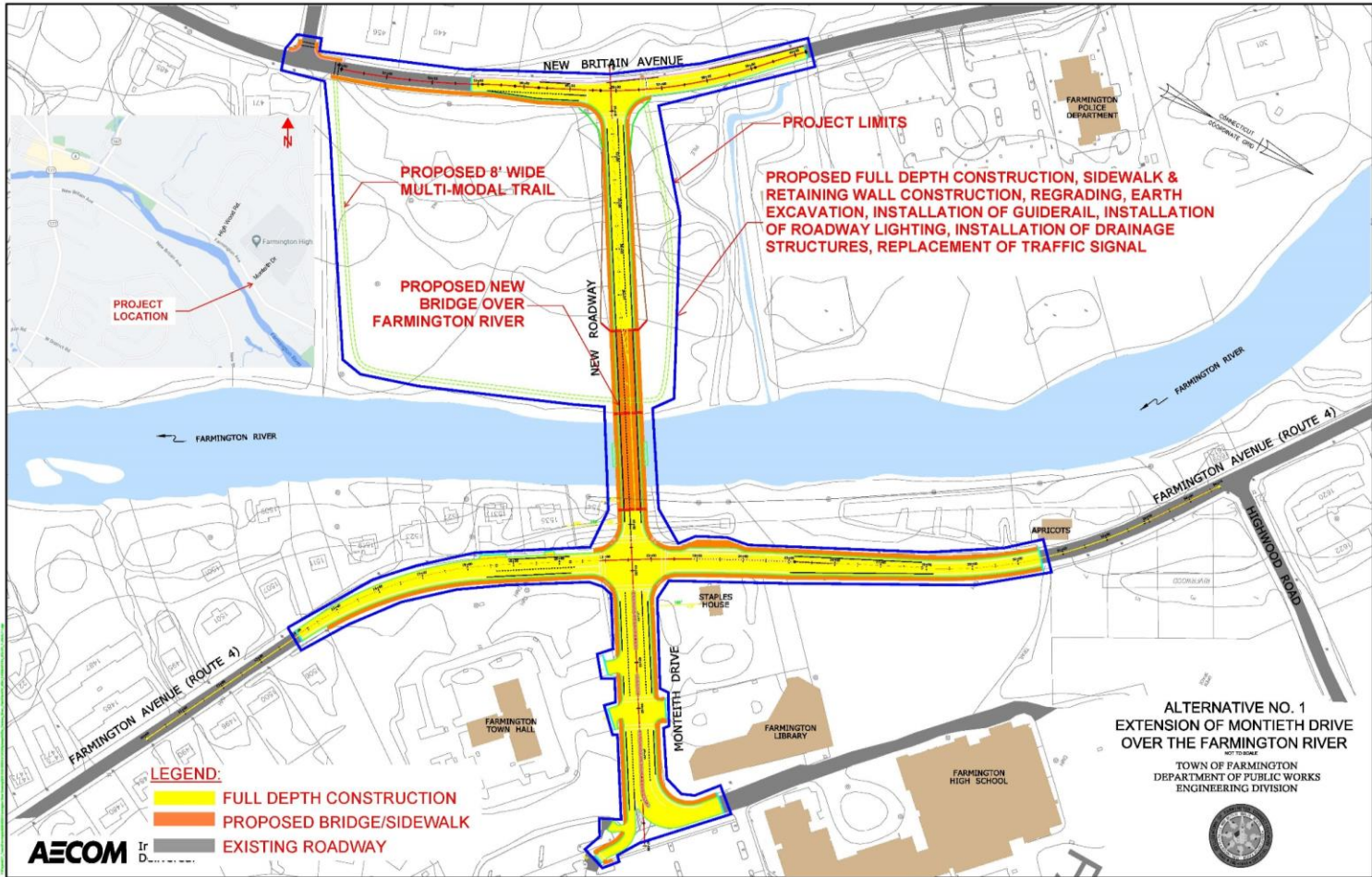
Kwesi Brown, PE, PTOE  
Manager of Transportation  
Engineering  
SLR Consulting

# Study Background/History- 1998 Plan



# Bridge Location





2018 Concept Plan by AECOM

# Monteith Bridge Rendering

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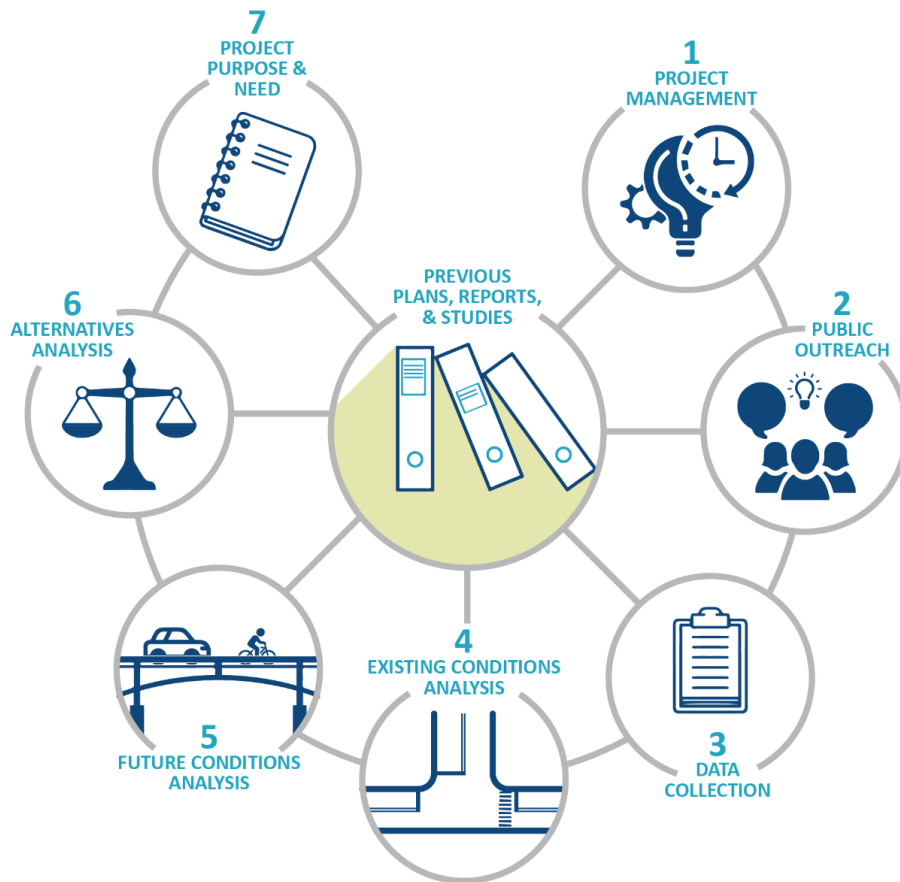
2018 Concept Plans  
by AECOM





Monteith Bridge Rendering- 2018 Concept Plans by AECOM

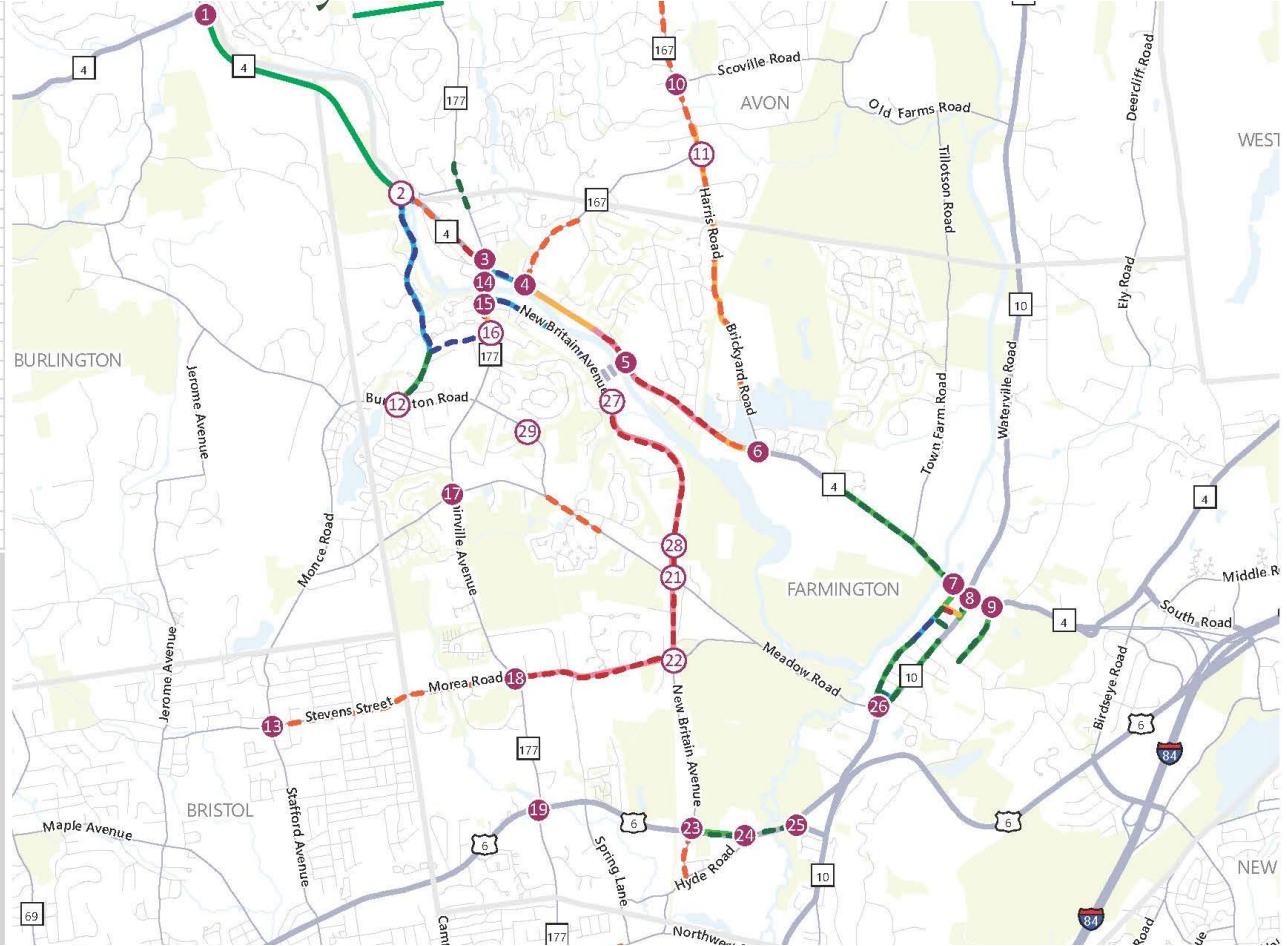
# Study Approach







# Study Area

1	Canton Road (Route 4)/Canton Road (Route 179) @ Spellman Highway (Route 4)
2	Collinsville Road (Route 4) @ River Road
3	Main Street (Route 4) @ Lovely Street (Route 177) @ School Street
4	Farmington Avenue (Route 4) @ West Avon Road (Route 167)
5	Farmington Avenue (Route 4) @ Monteth Drive
6	Farmington Avenue (Route 4) @ Brickyard Road/Bridgewater Road
7	Farmington Avenue (Route 4) @ Garden Street
8	Farmington Avenue (Route 4) @ Waterville Road/Main Street (Route 10)
9	Farmington Avenue (Route 4) @ High Street/Backage Road
10	West Avon Road (Route 167) @ Scoville Road
11	West Avon Road (Route 167) @ Harris Road
12	River Road at Burlington Road
13	Stafford Avenue @ Stevens Street
14	South Main Street (Route 177) @ Mill Street
15	South Main Street (Route 177) @ Railroad Avenue/New Britain Avenue
16	Plainville Avenue (Route 177) @ Webster Street
17	Plainville Avenue (Route 177) @ Coppermine Road
18	Plainville Avenue (Route 177) @ Morea Road/Meadow Road
19	Plainville Avenue (Route 177) @ Scott Swamp Road (Route 6)
20	Plainville Avenue (Route 177) at Northwest Drive
21	Red Oak Hill Road @ New Britain Avenue
22	Meadow Road @ New Britain Avenue
23	Scott Swamp Road (Route 6) @ New Britain Avenue
24	Scott Swamp Road (Route 6) @ Hyde Road
25	Colt Highway (Route 6) @ Scott Swamp Road (Route 552)
26	Main Street (Route 10) @ Meadow Road
27	New Britain Avenue @ Oakridge
28	New Britain Avenue @ Coppermine Road
29	West District Road @ Whispering Rod Road/Chaffee Lane



## LEGEND

### Proposed Study Intersections

-  Signalized Intersection
-  Unsignalized Intersection

### Peak Period (3 Hr) Difference (with Bridge)

-  AM: -1,500 to -200 vehicles
-  AM: -199 to -100 vehicles
-  AM: 100 to 199 vehicles
-  AM: 200 to 1,500 vehicles
-  PM: -1,500 to -200 vehicles
-  PM: -199 to -100 vehicles
-  PM: 100 to 199 vehicles

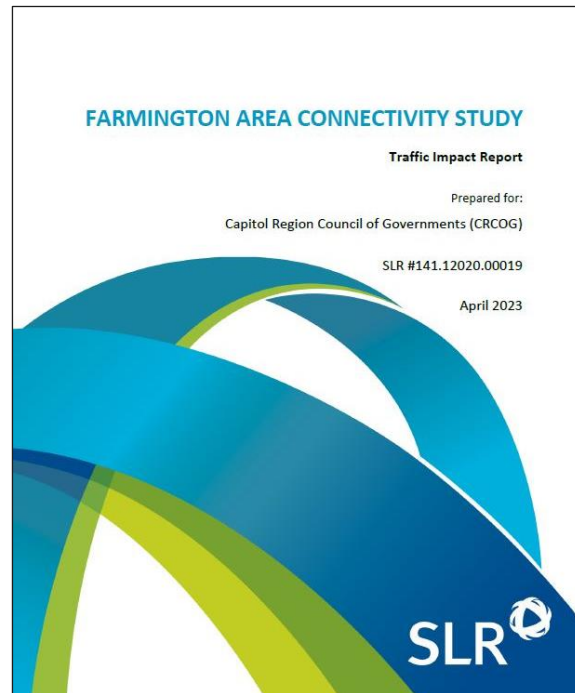
AM Peak Period:  
6:00 - 9:00 AM





# Study to Date

- Stakeholder Engagement
- Traffic & Safety Data Collection
- Existing Conditions Analysis
- Future (2050) Traffic Conditions
  - No Build, Build, Existing Route 177 Bridge out of Service with New Bridge and without New Bridge
- Travel Time Runs (Oakridge Neighborhood)
- Traffic Impact Report (April 2023)





# Stakeholder & Public Engagement

- Town of Farmington (Dec. 15, 2021)
  - Engineering, Board of Education & Emergency Services
- Adjacent Towns Planning and Engineering Staff (Nov. 18, 2021)
- Farmington Environmental – Various Agencies (Dec. 16, 2021)
  - Lower Farmington River and Salmon Brook Wild & Scenic Committee
  - National Park Service
  - Farmington River Watershed Association
- CT Transit (Feb. 16, 2022)
- CTDOT Interagency Environmental – Feb. 25, 2022
- Public Informational Meeting- Nov. 29, 2023

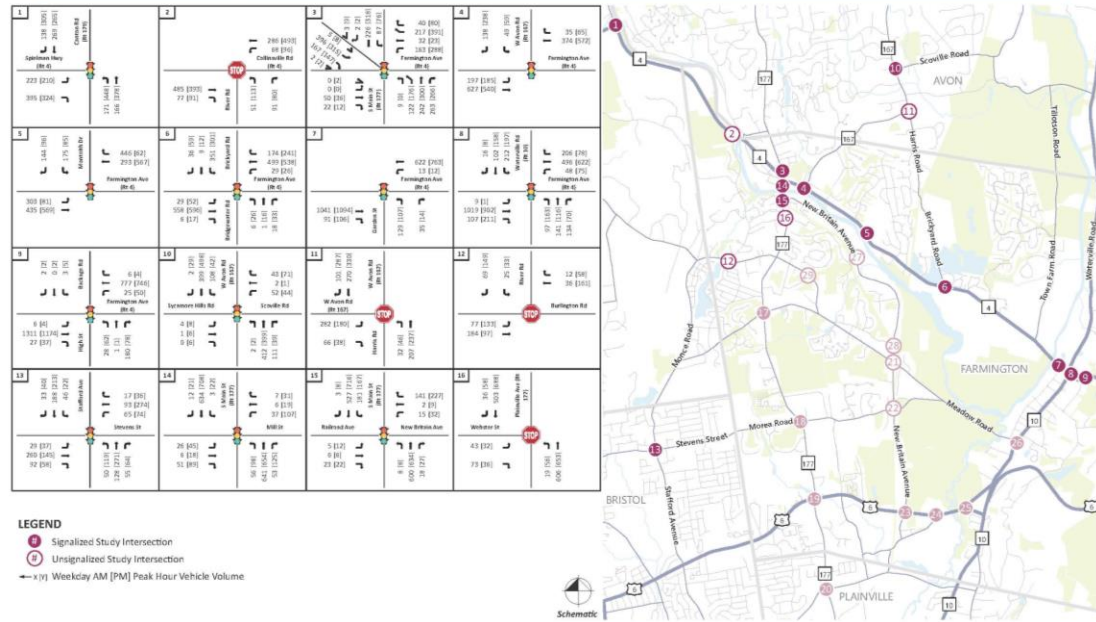


# Traffic Data Collection

- Traffic Counts
  - 9/2021, 10/2021 and 1/2023
- Farmington Ave:
  - ADT: 16,500 Vehicles
  - Avg Speed: 43.4 mph
  - 85<sup>th</sup> Percentile Speed: 47.9 mph
- New Britain Ave
  - ADT ; 4,061 Vehicles
  - Avg Speed: 40.7 mph
  - 85<sup>th</sup> Percentile Speed: 46.4 mph

Figure 3a - Existing (2021) Conditions Peak-Hour Traffic Volumes (Intersections 1-16)

SLR





# Crash Analysis

- 2020 Capitol Regional Transportation Safety Plan
- CT Crash Data Repository
  - Crash Data within ½ mile radius of Proposed Bridge
- Farmington Avenue Intersections
  - 33 Total Crashes
  - 66% Property Damage
  - No Fatalities

Table 1 Farmington Avenue (Route 4) Crash Summary (2018-2021)

LOCATION	CRASH SEVERITY			TYPE OF COLLISION								
	PROPERTY DAMAGE ONLY	INJURY	TOTAL	REAR END	ANGLE	HIT ROADSIDE FIXED OBJECT	SIDESWIPE (SAME DIRECTION)	SIDESWIPE (OPPOSITE DIRECTION)	HEAD ON	HIT OBJECT IN ROADWAY	HIT PEDESTRIAN	TOTAL
<b>INTERSECTIONS</b>												
Route 4 at Walnut Street	0	1	1	1	0	0	0	0	0	0	0	1
Route 4 at Highwood Road	5	1	6	6	0	0	0	0	0	0	0	6
Route 4 at Monteith Drive	5	2	7	6	0	0	1	0	0	0	0	7
Route 4 at Knollwood Road	9	3	12	10	1	0	1	0	0	0	0	12
Route 4 at Wyndwood Road	3	4	7	3	1	1	1	0	1	0	0	7
<i>Intersection Total</i>	<b>22</b>	<b>11</b>	<b>33</b>	<b>26</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>33</b>
<b>ROAD SEGMENTS</b>												
Walnut Street – Highwood Road	9	6	15	13	0	1	0	0	1	0	0	15
Highwood Road – Monteith Drive	9	2	11	6	1	1	0	0	1	2	0	11
Monteith Drive – Knollwood Road	9	4	13	5	2	2	1	2	0	0	1	13
Knollwood Road – Wyndwood Road	7	1	8	6	0	1	0	0	0	1	0	8
Wyndwood Road – Trail Crossing	3	2	5	2	3	0	0	0	0	0	0	5
<i>Segment Total</i>	<b>37</b>	<b>15</b>	<b>52</b>	<b>32</b>	<b>6</b>	<b>5</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>52</b>

Source: Connecticut Crash Data Repository from January 1, 2018, to December 6, 2021.



# Crash Analysis

- New Britain Avenue Intersections
  - 2 Total Crashes
  - All Property Damage
  - 1 Fatality between Oakridge and Roma Drive (Road departure crash)

Table 2 New Britain Avenue Crash Summary (2018-2021)

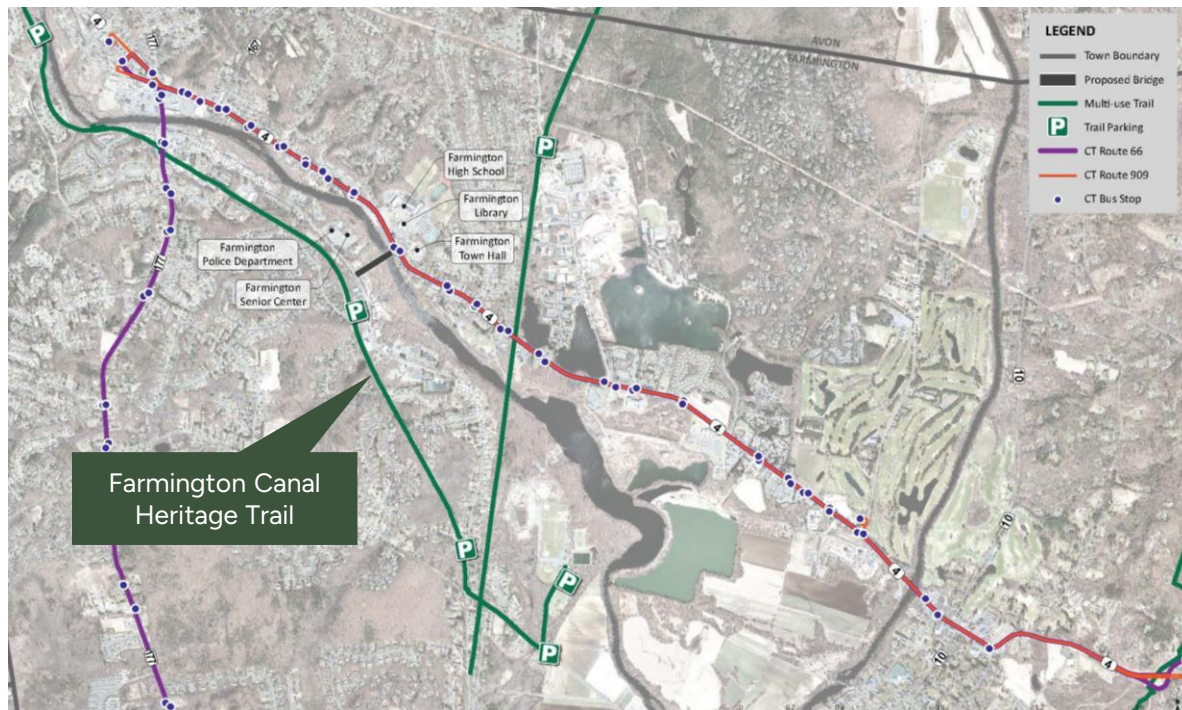
LOCATION	CRASH SEVERITY				TYPE OF COLLISION					
	PROPERTY DAMAGE ONLY	INJURY	FATAL	TOTAL	HIT ROADSIDE FIXED OBJECT	ANGLE	HIT ANIMAL	REAR END	SIDESWIPE (SAME DIRECTION)	TOTAL
INTERSECTIONS										
New Britain Avenue at Haberern Avenue	1	0	0	1	0	0	0	1	0	1
New Britain Avenue at Oakridge	1	0	0	1	0	1	0	0	0	1
<i>Intersection Total</i>	<i>2</i>	<i>0</i>	<i>0</i>	<i>2</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>2</i>
ROAD SEGMENTS										
Haberern Avenue – Monteith Drive Extension (New Bridge)	3	0	0	3	2	1	0	0	0	3
Monteith Drive Extension – Oakridge	0	1	0	1	1	0	0	0	0	1
Oakridge – Roma Drive	4	2	1	7	5	0	1	0	1	7
<i>Segment Total</i>	<i>7</i>	<i>3</i>	<i>1</i>	<i>11</i>	<i>8</i>	<i>1</i>	<i>1</i>	<i>0</i>	<i>1</i>	<i>11</i>

Source: Connecticut Crash Data Repository from January 1, 2018, to December 6, 2021



# Multi-modal facilities

- CT Transit
  - Routes 66 (local),  
Route 909 (express)
- Multi-Use Trails
  - Farmington River Trail
  - Farmington Canal  
Heritage Trail





# Future Conditions Traffic Analysis

- Scenario 1: Future 2050 No Build – With only the existing Route 177 Bridge in place
- Scenario 2: Future 2050 Build – With both the existing and proposed Monteith Drive bridge in place
- Other Scenarios
  - Scenario 3: Future 2050 No Build with the existing Route 177 Bridge out of service and without the proposed bridge
  - Scenario 4: Future 2050 Build with the existing Route 177 Bridge out of service but with the proposed Monteith Bridge in place
- CRCOG's Travel Demand Model generated future volumes



# Traffic Level of Service

LEVEL-OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS MOTORIZED VEHICLE MODE		
LOS By Volume-to-Capacity Ratio <sup>1</sup>		CONTROL DELAY (s/veh)
v/c ≤ 1.0	v/c > 1.0	
A	F	≤ 10
B	F	> 10 AND ≤ 20
C	F	> 20 AND ≤ 35
D	F	> 35 AND ≤ 55
E	F	> 55 AND ≤ 80
F	F	> 80

LEVEL-OF SERVICE CRITERIA FOR TWSC INTERSECTIONS	
LOS <sup>1</sup>	CONTROL DELAY (s/veh)
A	≤ 10
B	> 10 AND ≤ 15
C	> 15 AND ≤ 25
D	> 25 AND ≤ 35
E	> 35 AND ≤ 50
F	> 50



# Traffic Level of Service

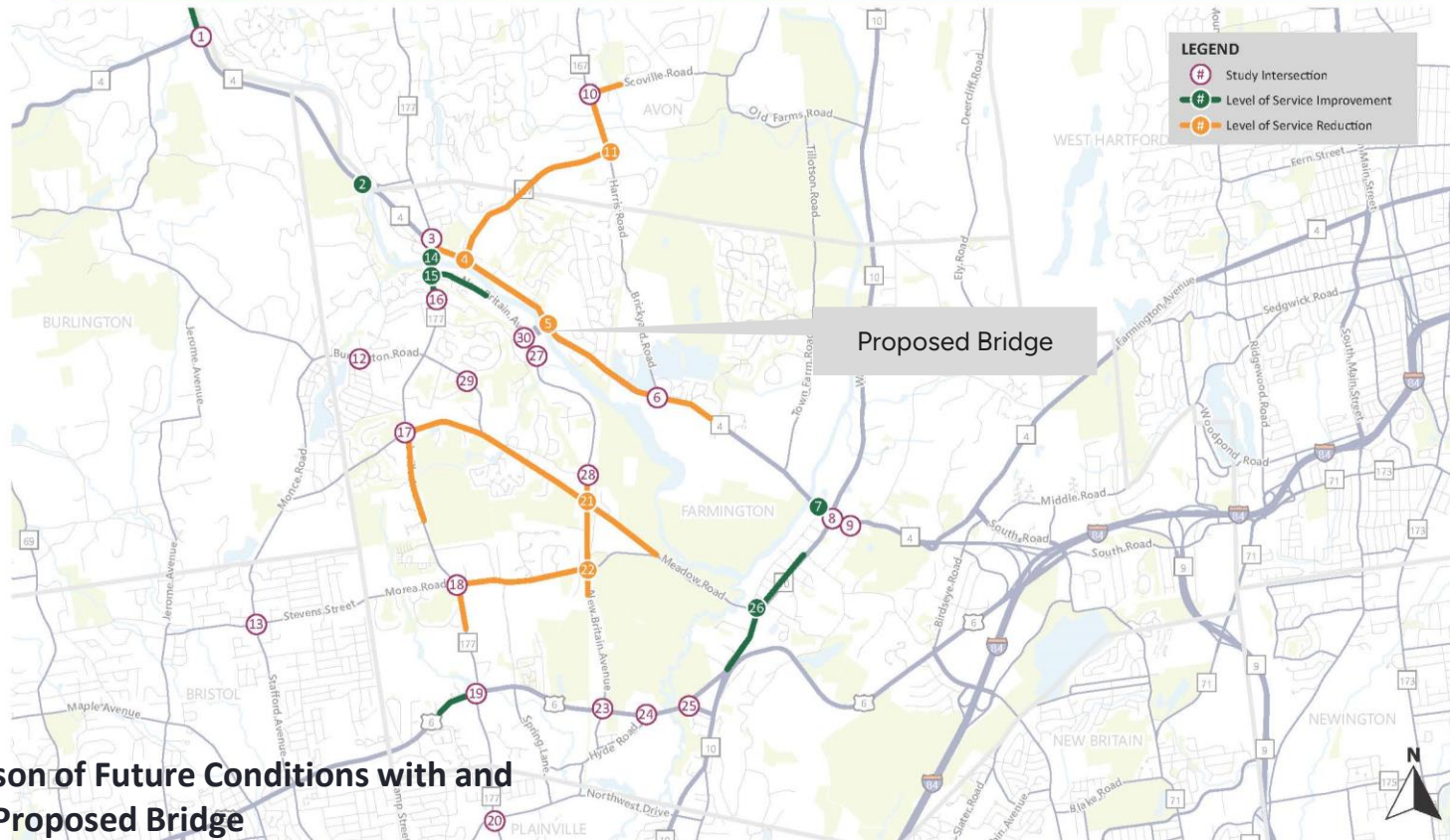
## Comparison of Future 2050 Conditions with and without Proposed Bridge

INTERSECTION/LANE GROUP	2050 SCENARIOS 1 & 2 (NO-BUILD AND BUILD CONDITIONS) LEVEL OF SERVICE			
	A.M. PEAK HOUR		P.M. PEAK HOUR	
	SCENARIO 1 (NO-BUILD)	SCENARIO 2 (BUILD)	SCENARIO 1 (NO-BUILD)	SCENARIO 2 (BUILD)
Northbound Right	B	B	B	B
Southbound Left/Through/Right	E	E	E	E
<i>Overall</i>	<i>B</i>	<i>B</i>	<i>B</i>	<i>B</i>
<b>10: W Avon Rd (RT 167) &amp; Sycamore Hills Rd/Scoville Rd</b>				
Eastbound Left/Through/Right	C	C	C	C
Westbound Left/Through/Right	C	D	C	C
Northbound Left/Through/Right	C	C	C	C
Southbound Left/Through/Right	D	D	B	B
<i>Overall</i>	<i>D</i>	<i>D</i>	<i>C</i>	<i>C</i>
<b>13: Stafford Ave &amp; Stevens St</b>				
Eastbound Left/Through/Right	C	C	C	C
Westbound Left/Through/Right	C	C	C	C
Northbound Left/Through/Right	E	E	F	F
Southbound Left/Through/Right	D	D	C	C
<i>Overall</i>	<i>D</i>	<i>D</i>	<i>F</i>	<i>F</i>
<b>14: S Main St (RT 177) &amp; Mill St</b>				
Eastbound Left/Through	D	D	D	C
Eastbound Right	C	C	C	B
Westbound Left/Through	E	D	D	D
Westbound Right	D	D	C	C
Northbound Left	B	A	A	A
Northbound Through/Right	B	A	A	A
Southbound Left	B	B	B	A
Southbound Through/Right	C	B	C	B
<i>Overall</i>	<i>C</i>	<i>B</i>	<i>B</i>	<i>B</i>
<b>15: S Main St (RT 177) &amp; Railroad Ave/New Britain Ave</b>				
Eastbound Left/Through/Right	D	D	D	C
Westbound Left/Through	D	C	D	D
Westbound Right	C	B	C	B
Northbound Left	B	B	B	B
Northbound Through/Right	C	B	C	B
Southbound Left	C	A	C	A
Southbound Through/Right	A	A	A	A
<i>Overall</i>	<i>B</i>	<i>B</i>	<i>C</i>	<i>B</i>
<b>17: Plainville Ave (RT 177) &amp; Coopermine Rd</b>				



# Traffic Level of Service

Figure 13 - Future (2050) Conditions Operational Changes with the Proposed Monteith Drive Bridge (Comparison of Scenarios 1 & 2)



Comparison of Future Conditions with and without Proposed Bridge



# Analysis of Potential Neighborhood Impacts/Cut Through Traffic

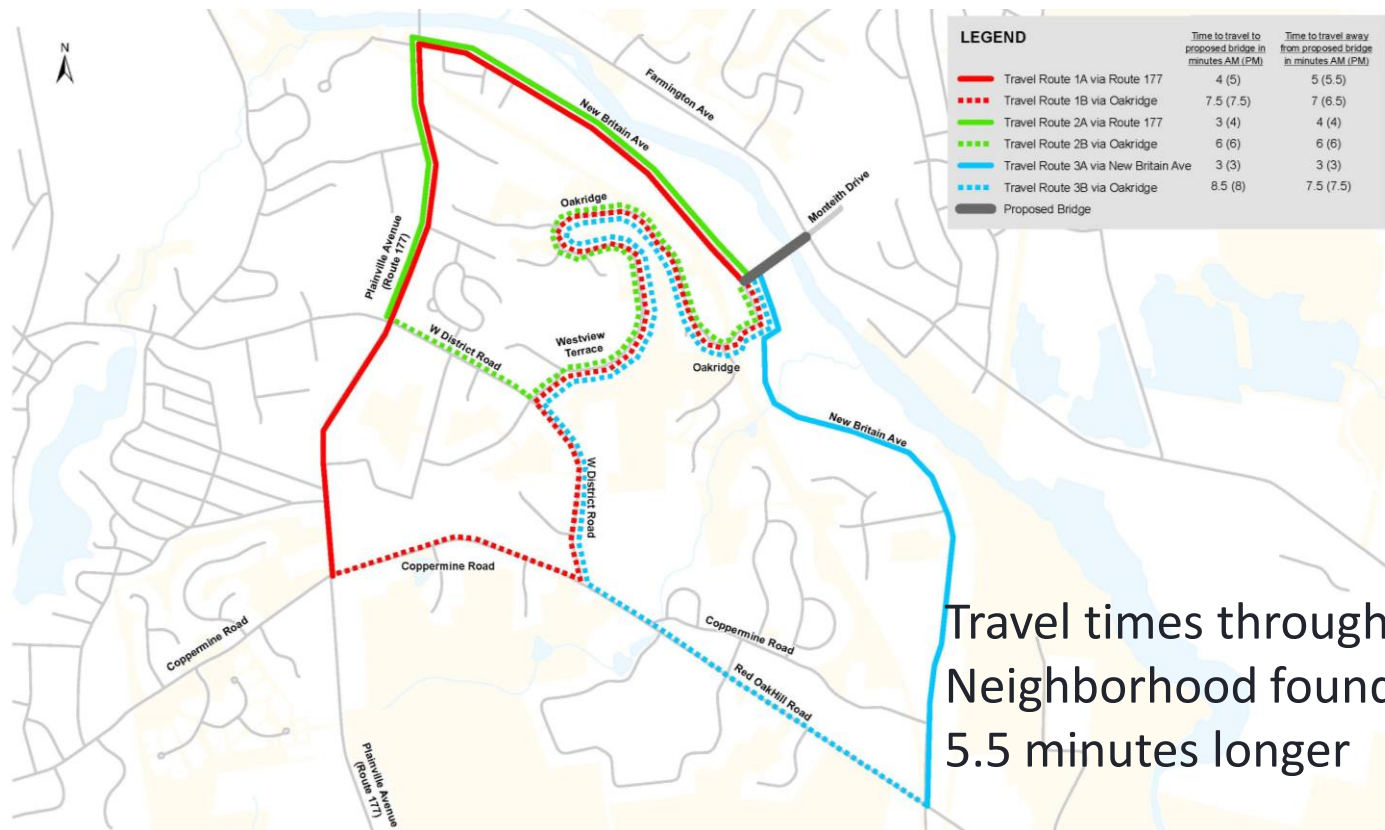
- Trips to and from Proposed Bridge
  - Route 177 at Coppermine Road
  - Route 177 at West District Road
  - Red Oak Hill Road at New Britain Avenue
- Time of Runs
  - Peak (7-8 am) and Off Peak (2-3 pm)

Table 5 Traffic Routing Analysis

Start/End Intersection	Via	7:00 - 8:00 A.M.		2:00 - 3:00 P.M.	
		Time to travel to proposed bridge (minutes)	Time to travel away from proposed bridge (minutes)	Time to travel to proposed bridge (minutes)	Time to travel away from proposed bridge (minutes)
Plainville Avenue (Route 177) at Coppermine Road	Plainville Avenue and New Britain Avenue	4	5	5	5.5
	Coppermine Road and Oakridge	7.5	6	7.5	6.5
Plainville Avenue (Route 177) at West District Road	Plainville Avenue and New Britain Avenue	3	4	4	4
	West District Road and Oakridge	6	6	6	6
Red Oak Hill Road at New Britain Avenue	New Britain Avenue	3	3	3	3
	Red Oak Hill Road and Oakridge	8.5	7.5	8	7.5



# Analysis of Potential Neighborhood Impacts/Cut Through Traffic



Travel times through Oakridge Neighborhood found to be 1 to 5.5 minutes longer



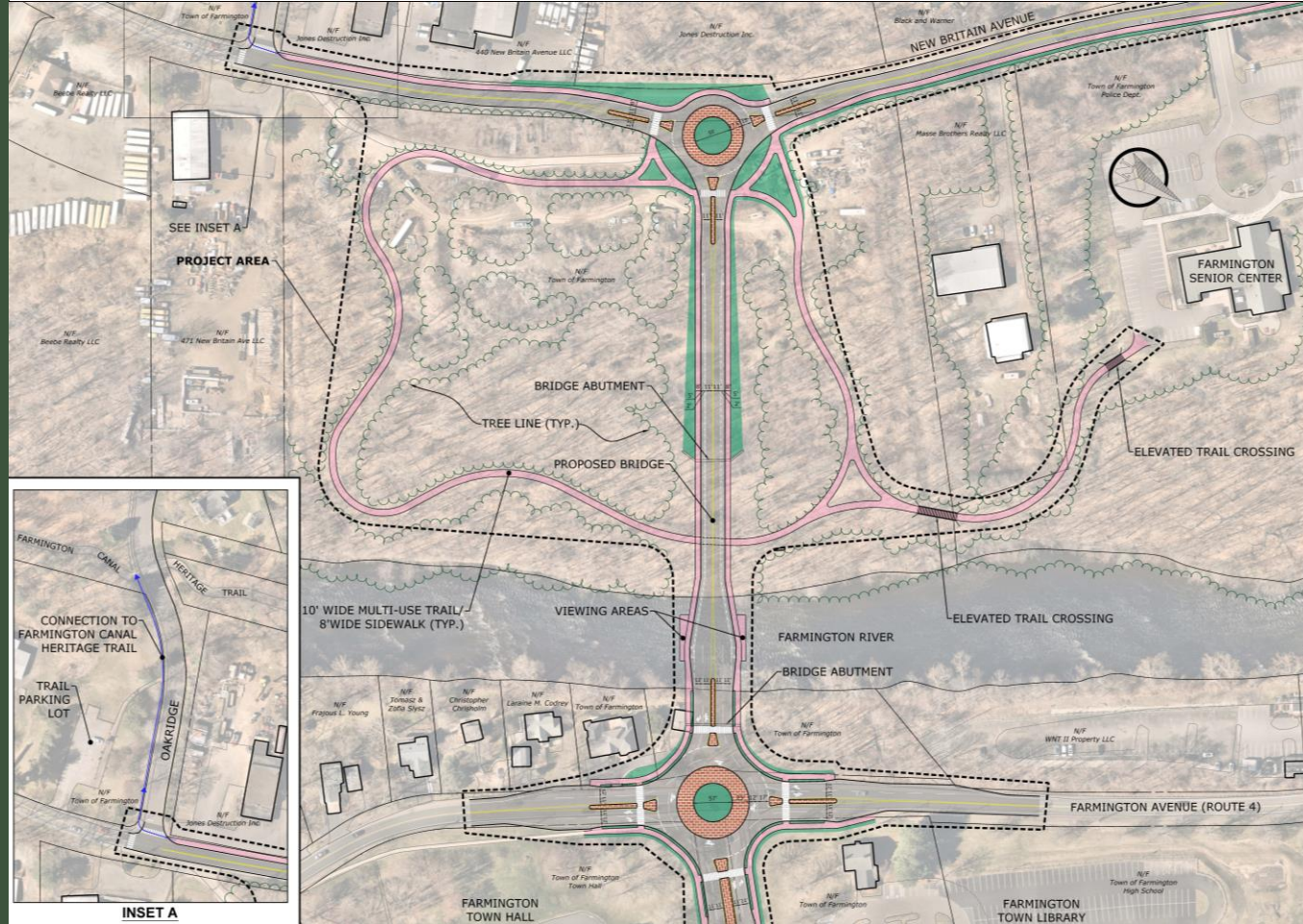
# Preliminary Improvement Alternatives

- Preliminary Alternative 1
  - Roundabouts at Both Intersections
- Preliminary Alternative 2
  - Traffic Signalization at Both Intersections
- Preliminary Alternative 3
  - Roundabout at New Britain Avenue and Traffic Signal at Farmington Avenue

# Preliminary Alternative 1

- Roundabout  
Option

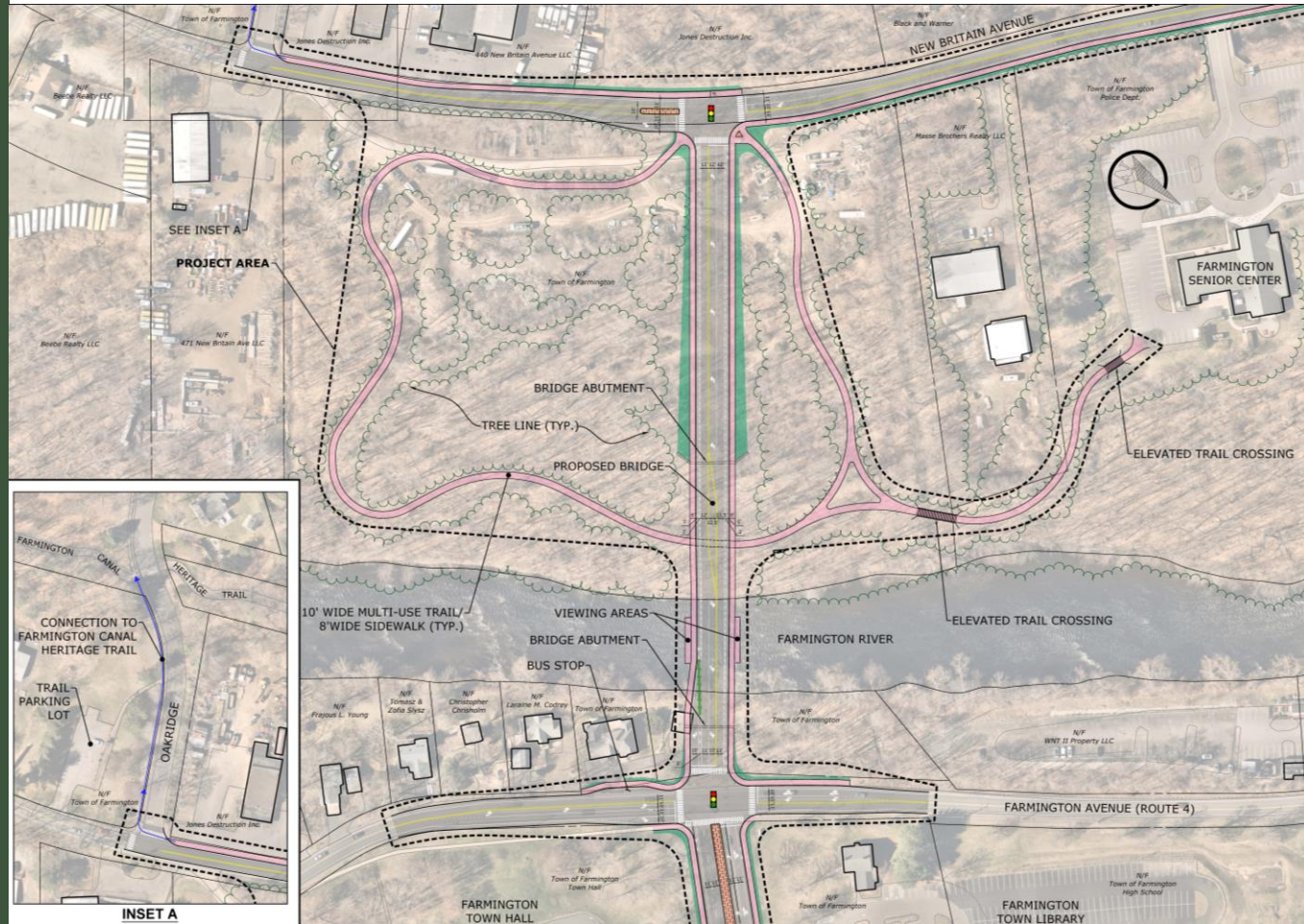
INTERSECTION/LANE GROUP	LEVEL OF SERVICE			
	A.M. PEAK HOUR		P.M. PEAK HOUR	
	DELAY [s]	LOS	DELAY [s]	LOS
<b>5: Farmington Ave [Rte 4] &amp; New Bridge</b>				
Eastbound Left	9.0	A	4.6	A
Eastbound Through/Right	25.1	D	23.4	C
Westbound Left	8.9	A	5.3	A
Westbound Through	12.6	B	11.5	B
Westbound Right	0.0	A	0.0	A
Northbound Left	11.8	B	10.2	B
Northbound Through	32.2	D	12.0	B
Northbound Right				
Southbound Left	10.0	A	9.4	A
Southbound Through/Right	9.9	A	10.0	A
Overall	15.4	C	14.2	B
<b>30: New Britain Ave &amp; New Bridge</b>				
Eastbound Left/Thru	10.2	B	5.1	A
Eastbound Through				
Westbound Thru/Right	7.9	A	8.8	A
Westbound Right				
Southbound Left/Right	7.0	A	5.6	A



# Preliminary Alternative 2

- Traffic Signal Option

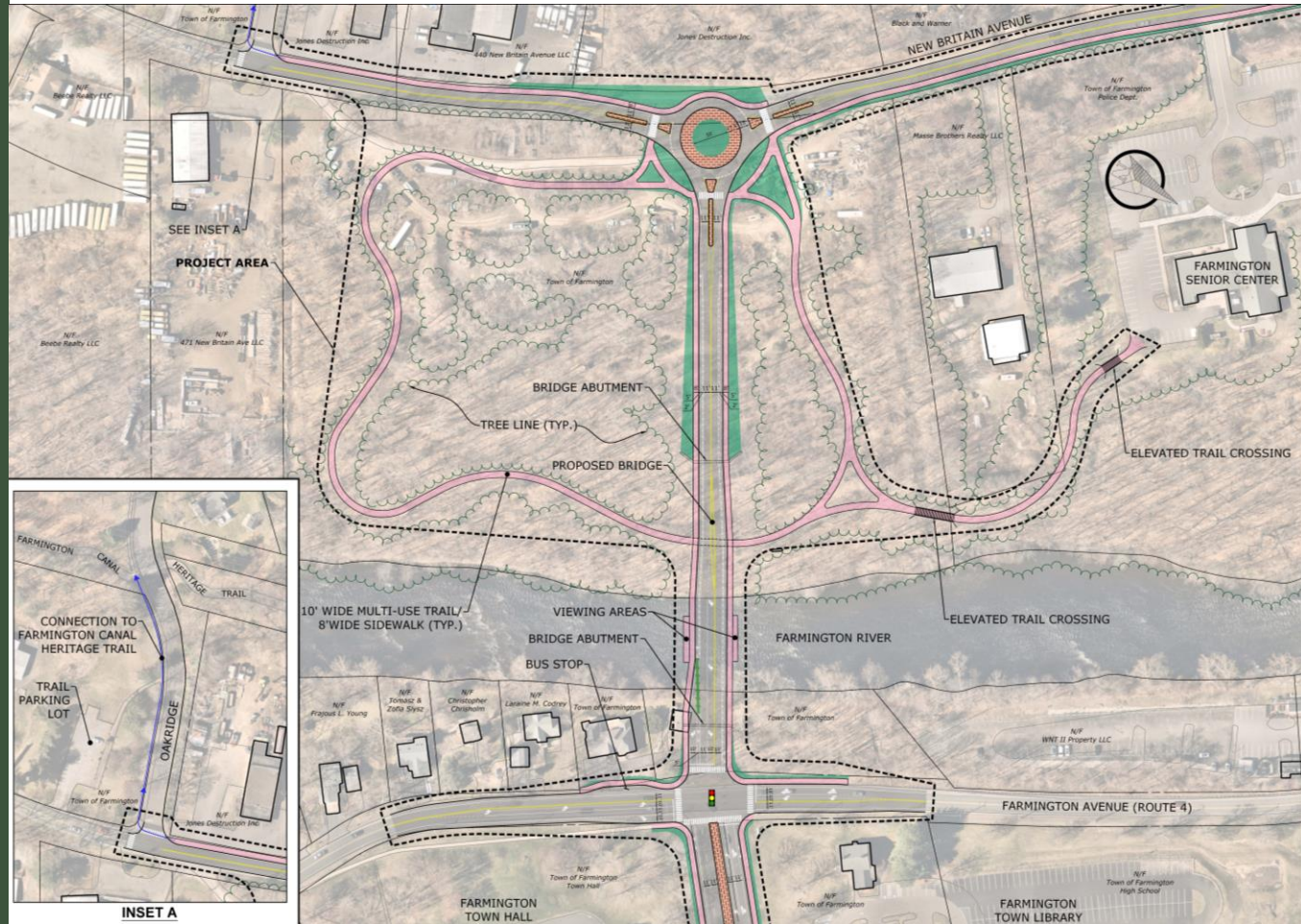
Alternative 2					
INTERSECTION/LANE GROUP	2050 SCENARIO 2 (BUILD CONDITIONS)				
	LEVEL OF SERVICE				
	A.M. PEAK HOUR		P.M. PEAK HOUR		
	DELAY [s]	LOS	DELAY [s]	LOS	
<b>S: Farmington Ave (Rte 4) &amp; New Bridge</b>					
Eastbound Left	13.8	B	8.7	A	
Eastbound Through/Right	42.3	D	54.9	D	
Westbound Left	35.3	D	39.7	D	
Westbound Through	24.0	C	19.3	B	
Westbound Right	10.3	B	0.8	A	
Northbound Left	44.4	D	44.2	D	
Northbound Through	38.6	D	33.2	C	
Northbound Right	7.9	A	7.2	A	
Southbound Left	41.6	D	33.5	C	
Southbound Through/Right	44.3	D	43.3	D	
<b>Overall</b>	<b>28.8</b>	<b>C</b>	<b>34.7</b>	<b>C</b>	
<b>30: New Britain Ave &amp; New Bridge</b>					
Eastbound Left	7.7	A	7.3	A	
Eastbound Through	8.6	A	6.6	A	
Westbound Through	13.2	B	14.3	B	
Westbound Right	7.4	A	5.3	A	
Southbound Left	28.9	C	18.6	B	
Southbound Right	6.3	A	4.8	A	
<b>Overall</b>	<b>15.5</b>	<b>B</b>	<b>11.3</b>	<b>B</b>	



# Preliminary Alternative 3

- Roundabout - Signal Option

Alternative 3					
2050 SCENARIO 2 (BUILT CONDITIONS)					
INTERSECTION/LANE GROUP	LEVEL OF SERVICE				
	A.M. PEAK HOUR		P.M. PEAK HOUR		
	DELAY [S]	LOS	DELAY [S]	LOS	
<b>S: Farmington Ave (Rte 4) &amp; New Bridge</b>					
Eastbound Left	13.8	B	8.7	A	
Eastbound Through/Right	42.3	D	34.9	D	
Westbound Left	33.3	D	39.7	D	
Westbound Through	24.0	C	19.3	B	
Westbound Right	10.3	B	0.8	A	
Northbound Left	44.4	D	44.2	D	
Northbound Through	38.6	D	33.2	C	
Northbound Right	7.9	A	7.2	A	
Southbound Left	41.6	D	33.3	C	
Southbound Through/Right	44.3	D	45.3	D	
<b>Overall</b>	<b>28.8</b>	<b>C</b>	<b>34.7</b>	<b>C</b>	
<b>S0: New Britain Ave &amp; New Bridge</b>					
Eastbound Left/Thru	10.2	B	3.1	A	
Eastbound Through					
Westbound Through/Right	7.9	A	8.8	A	
Westbound Right					
Southbound Left/Right	7.0	A	8.4	A	
Southbound Right					
<b>Overall</b>	<b>8.1</b>	<b>A</b>	<b>8.4</b>	<b>A</b>	

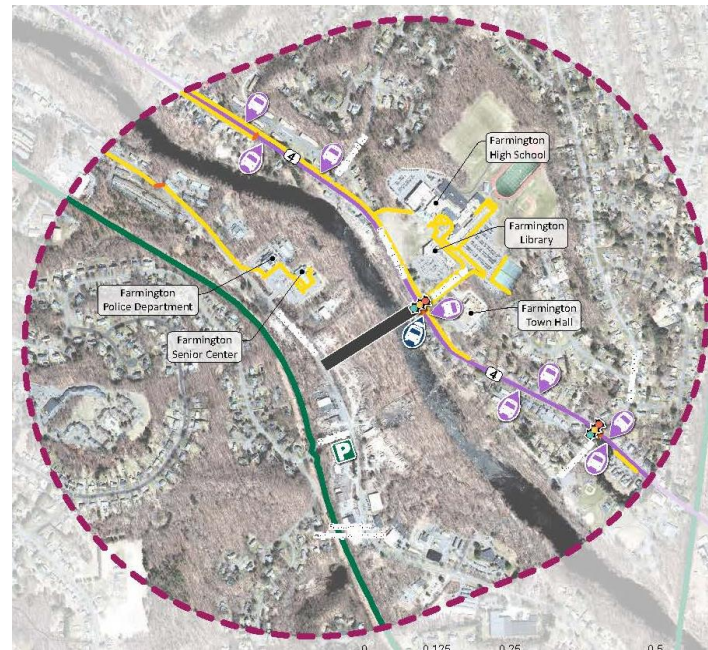


INSET A



# Findings

- Traffic Level of Service
  - LOS improvement on Route 177 corridor (Unionville)
  - LOS reduction in vicinity of proposed bridge
- Enhanced Connections between landmark facilities
  - Police station, senior center, high school, Town Hall, Library
- Bike Improvements
  - Multi-use trail along the river and connection to FCHT, bike lanes
- Potential New Bus Routes and Stops
- Neighborhood cut throughs not anticipated
- Quicker Emergency Response





# Next Steps

- Selection of Preferred Improvement Alternative
- Final CRCOG Study Report
- Seek Project Funding
- Environmental Study
- Engineering/Design
- Construction



# Questions/Comments

Study Documents on CRCOG Website

<https://crocog.org/farmington-connectivity-study-2/>

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Town of Farmington

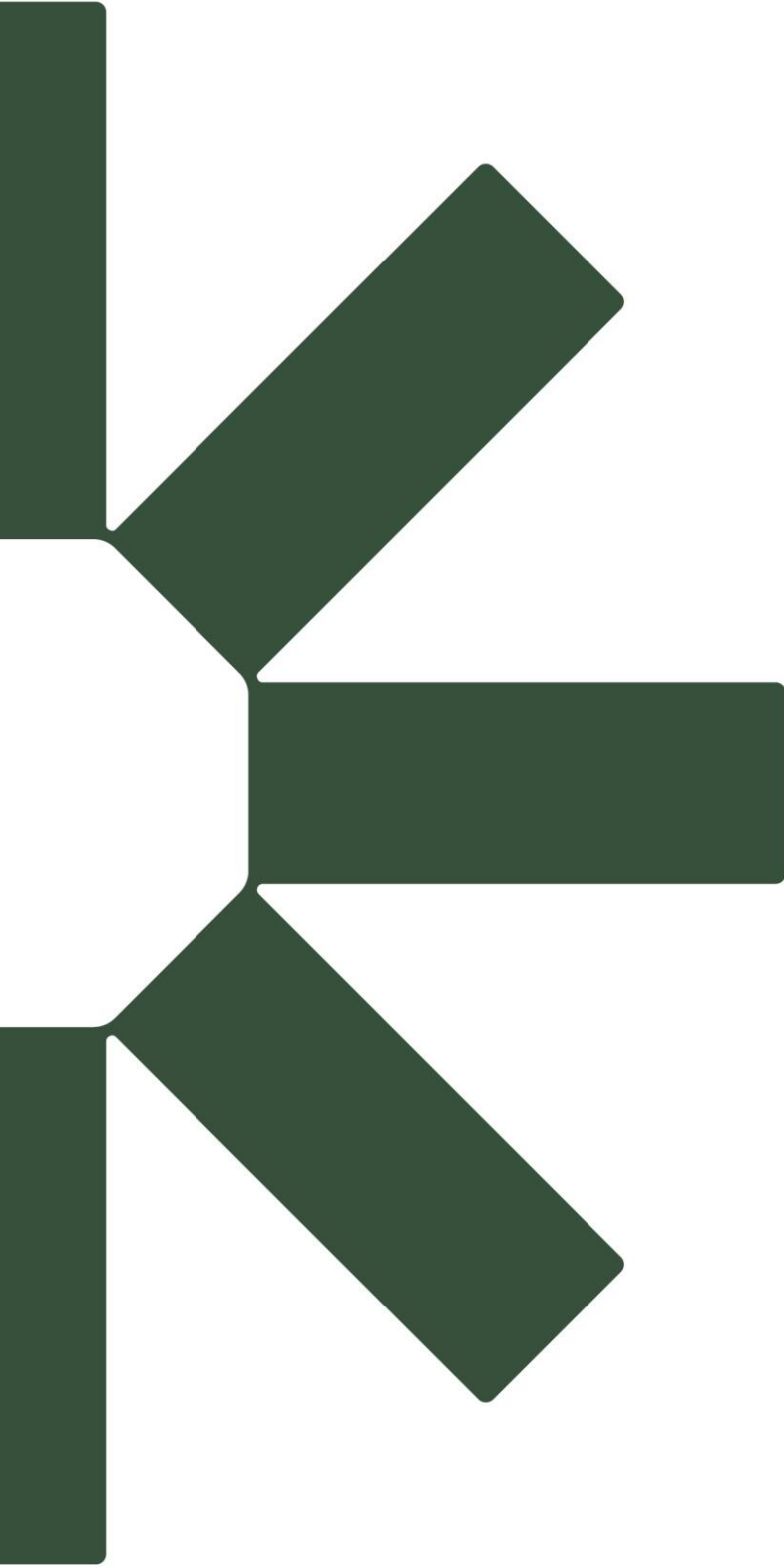
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Making Sustainability Happen