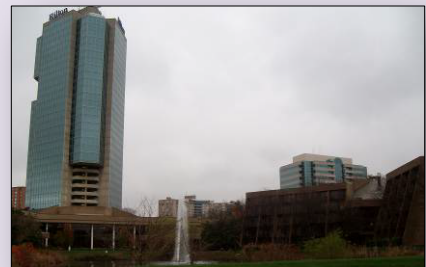


# Beauregard Corridor Small Area Plan Transportation Analysis

January 18, 2012

## Volume II: Appendices



Prepared For



By





## A Appendix A: Transit Corridor Assumptions

This plan assumes a dedicated corridor transit service along Van Dorn Street, Sanger Avenue and Beauregard Street. The assumed transitway alignments relevant to the study area include:

- Median running dedicated transit lane along Beauregard Street between King Street and Main Street (within Southern Towers)
- Mixed operations along Main Street (within Southern Towers), Mark Center Drive between Main Street and Beauregard Street (serving BRAC)
- Median running dedicated transit lane along Beauregard Street between Mark Center Drive and Sanger Avenue
- Median running dedicated transit lane along Sanger Avenue between Beauregard Street and existing Knole Court
- Mixed operations along eastbound Sanger Avenue between existing Knole Court and Van Dorn Street (about 400 feet). Eastbound Sanger Avenue approaching Van Dorn Street consists of a right-turn lane, a shared right-through-left lane with transit turning right from the median lane.
- Median running dedicated transit lane along westbound Sanger Avenue between Van Dorn Street and Beauregard Street.

Transit stops were assumed at the following locations:

- Sanger Avenue at Beauregard Street
- Beauregard Street at Rayburn Avenue
- Mark Center
- Southern Towers
- Beauregard Street at Braddock Road

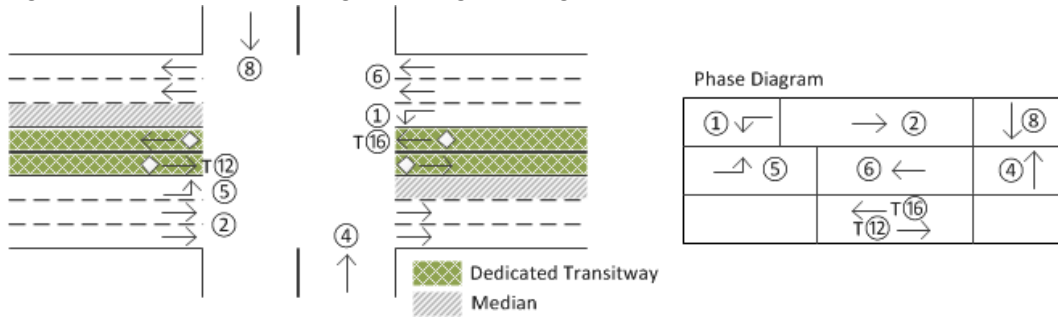
A dwell time of 20 seconds was used at each stop location and headway of five minutes was assumed for the transit service.

A cycle length of 120 seconds was used for all the signalized intersections along:

- (a) Beauregard Street from Chambliss Street (south-end) to Braddock Street (north-end)
- (b) Seminary Road from Dawes Avenue (north-end) to Jordan Street (south-end)

Signal timing/phasing was also designed to accommodate the transit service along Van Dorn and Beauregard corridor at relevant intersections. At signalized intersections where the median running transit vehicle makes a through movement along Beauregard Street, the transit signal phase is designed to get a green indication along with the corresponding auto/vehicle through phase. At these intersections, the auto/vehicle turning left on the permissive phase from northbound and southbound Beauregard Street conflict with the transit vehicle going through. Hence the left turns along Beauregard Street are designed as protected (only) left turns. Figure A-3 shows a prototype of intersection configuration along Beauregard Street and phase diagram. Please note the transit phase starts only when both left-turn phases end.

Figure A-3: Transit Phase Diagram along Beauregard Street



At signalized intersections where the transit vehicle makes a right or a left turn from the median lane, a separate transit signal phase is designed. The corresponding transit phase is only activated with a transit vehicle presence.

To reflect realistic future conditions, intersection splits and offsets were optimized based on the turning movement projections for the 2035 Baseline (With Development) scenario. Initial signal timing optimization for the study intersections was performed using Synchro. Signal timing information was further fine-tuned in VISSIM based on the simulation observations.

## **B Appendix B: Seminary Road at Library Lane Technical Analysis**

To determine an effective mitigation option to relieve the traffic congestion on eastbound Seminary Road at Library Lane in the future, three mitigation options were analyzed in VISSIM, and the results for each option were compared to a No Mitigation option. The traffic analysis for the Library Lane and Seminary Road intersection was based on projected 2020 With Interim Development PM peak hour volumes.

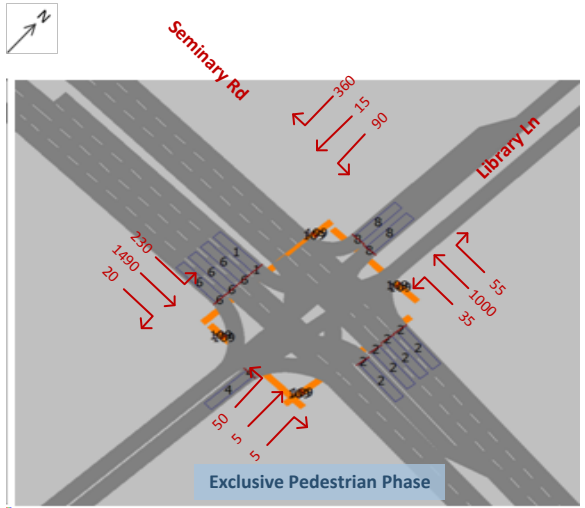
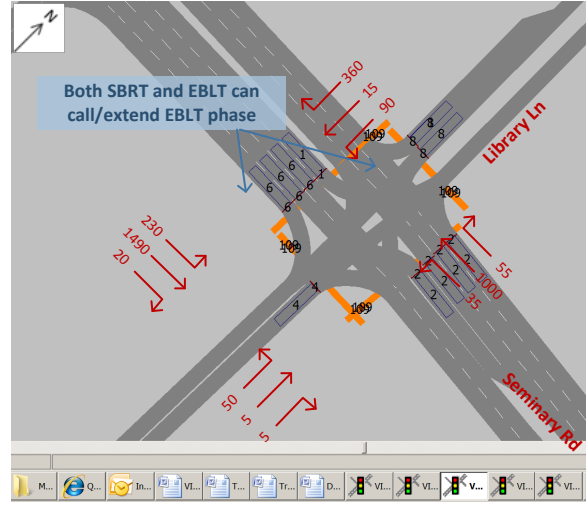
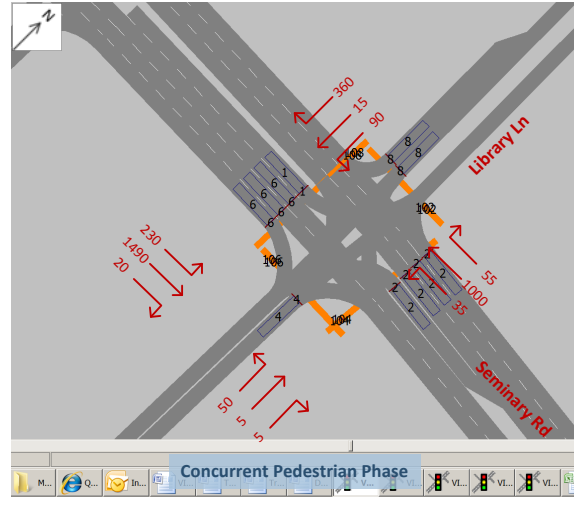
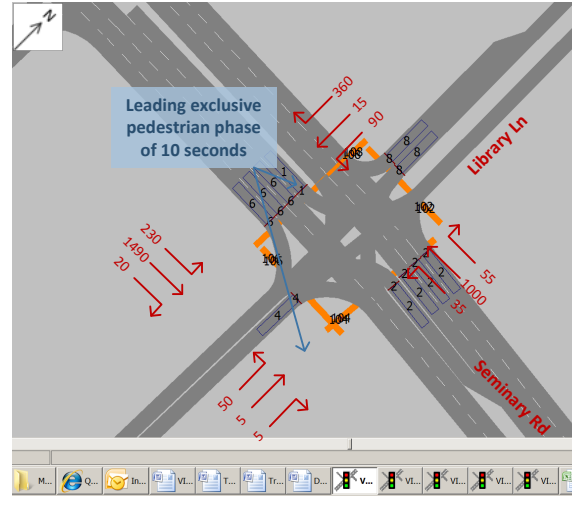
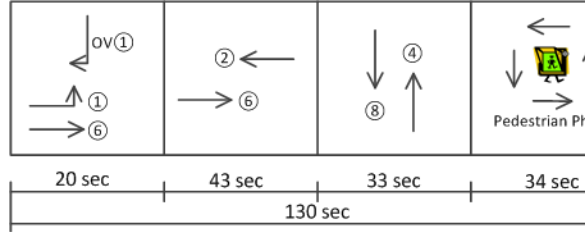
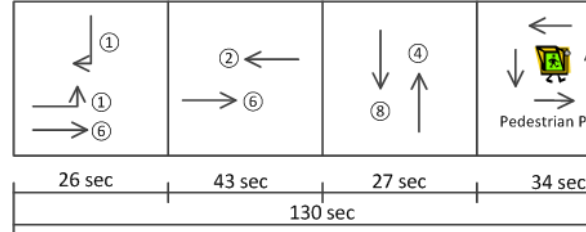
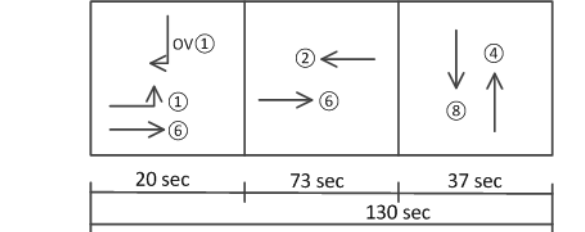
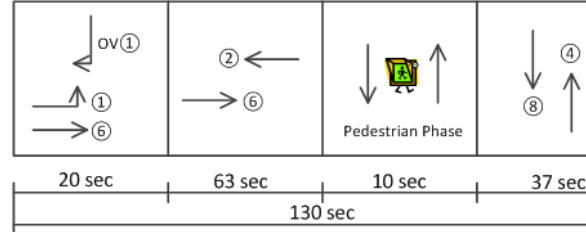
Table B-1 shows the description, lane configuration, signal phasing and simulation results for all options.

As shown in the table, queues on eastbound Seminary Road back up beyond the storage length of 950 feet between Library Lane and the I-395 rotary in the No Mitigation option and Option 1 (queue lengths are highlighted in red). The eastbound queue extends from Library Lane into the I-395 rotary and continues back further west for an additional 600 ft. The Seminary Road/Library Lane Intersection operates at LOS 'D' for both the No Mitigation option and Option 1.

Option 2 (concurrent pedestrian phase) and Option 3 (concurrent pedestrian phase with a lead time) improve the overall LOS and queues on the eastbound approach. The intersection LOS improves to 'B' and 'C' in Option 2 and Option 3 respectively.

The exclusive pedestrian phase has significant impacts on the intersection performance – especially for the eastbound traffic at this intersection. Based on the analysis, Option 3 is recommended for the future year signal operations at the intersection of Seminary Road and Library Lane. In this option, a 10-second leading pedestrian phase is provided for northbound and southbound approaches, allowing pedestrians to cross half-way before the start of the concurrent vehicle phases. This option balances the traffic operational efficiency and pedestrian safety at this intersection.

Table B-1: Traffic Analysis Results for Library Lane/Seminary Road

| Scenario             | No Mitigation   | Option 1: Improve signal operation   | Option 2: Concurrent pedestrian phase   | Option 3: Concurrent pedestrian phase with a lead time  |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
|----------------------|---|--|---|---|--------|--------|------|------|---|----|-----|------|------|---|----|-----|------|------|---|----|-----|------|------|---|-----|------|------|------|---|-----|------|------|------|---|-----|------|------|------|---|----|-----|------|------|---|----|-----|------|------|---|---|----|------|------|---|----|-----|------|------|---|----|-----|------|------|---|-----|-----|--------------|-------------|----------|--|--|--|----------|-------|-----|--------|--------|------|------|---|----|-----|------|------|---|----|-----|------|------|---|----|-----|------|------|---|-----|------|------|------|---|-----|------|------|------|---|-----|------|------|------|---|----|-----|------|------|---|----|-----|------|------|---|---|----|------|------|---|----|-----|------|------|---|----|-----|------|------|---|----|-----|--------------|-------------|----------|--|--|--|----------|-------|-----|--------|--------|------|------|---|---|----|------|-----|---|----|-----|------|-----|---|----|-----|------|------|---|----|-----|------|------|---|----|-----|------|-----|---|----|-----|------|------|---|----|----|------|------|---|----|----|------|------|---|----|----|------|------|---|----|-----|------|------|---|----|-----|------|-----|---|---|-----|--------------|-------------|----------|--|--|---|----------|-------|-----|--------|--------|------|------|---|---|----|------|------|---|----|-----|------|------|---|----|-----|------|------|---|-----|-----|------|------|---|-----|-----|------|------|---|-----|-----|------|------|---|----|----|------|------|---|----|----|------|------|---|----|----|------|------|---|----|-----|------|------|---|----|-----|------|------|---|-----|-----|--------------|-------------|----------|--|--|
| Description          | <ul style="list-style-type: none"> <li>Same lane configuration as existing condition</li> <li>Exclusive pedestrian phase</li> <li>Same signal operation as existing condition</li> <li>No turn on red on SB and WB approaches</li> <li>SBRT overlaps with EBLT but cannot call/extend EBLT phase</li> </ul>   | <ul style="list-style-type: none"> <li>Same lane configuration as existing condition</li> <li>Exclusive pedestrian phase</li> <li>Both SBRT and EBLT can call/extend EBLT phase</li> <li>No turn on red on SB and WB approaches</li> </ul> | <ul style="list-style-type: none"> <li>Same lane configuration as existing condition</li> <li>Concurrent pedestrian phase</li> <li>Right-turn on red is allowed on all approaches</li> <li>SBRT overlaps with EBLT but cannot call/extend EBLT phase</li> </ul> | <ul style="list-style-type: none"> <li>Same lane configuration as existing condition</li> <li>Concurrent pedestrian phase that leads by 10 seconds for NB/SB approaches</li> <li>No turn on red on SB and WB approaches</li> <li>SBRT overlaps with EBLT but cannot call/extend EBLT phase</li> </ul> |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| Lane Configuration   |   |    |   |   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| Signal Phase Diagram |    |   |    |    |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| LOS and Delays       | <table border="1"> <thead> <tr> <th>Movement</th> <th>Delay</th> <th>LOS</th> <th>Avg QL</th> <th>Max QL</th> </tr> </thead> <tbody> <tr><td>WBLT</td><td>87.3</td><td>F</td><td>12</td><td>106</td></tr> <tr><td>WBTH</td><td>23.6</td><td>C</td><td>53</td><td>296</td></tr> <tr><td>WBRT</td><td>25.0</td><td>C</td><td>53</td><td>296</td></tr> <tr><td>EBLT</td><td>60.9</td><td>E</td><td>932</td><td>1588</td></tr> <tr><td>EBTH</td><td>54.6</td><td>D</td><td>932</td><td>1588</td></tr> <tr><td>EBRT</td><td>44.0</td><td>D</td><td>933</td><td>1589</td></tr> <tr><td>NBLT</td><td>46.6</td><td>D</td><td>12</td><td>101</td></tr> <tr><td>NBTH</td><td>44.3</td><td>D</td><td>12</td><td>101</td></tr> <tr><td>NBRT</td><td>16.4</td><td>B</td><td>1</td><td>56</td></tr> <tr><td>SBLT</td><td>61.1</td><td>E</td><td>34</td><td>364</td></tr> <tr><td>SBTH</td><td>52.8</td><td>D</td><td>34</td><td>364</td></tr> <tr><td>SBRT</td><td>51.3</td><td>D</td><td>130</td><td>524</td></tr> <tr><td>Intersection</td><td><b>45.1</b></td><td><b>D</b></td><td></td><td></td></tr> </tbody> </table> | Movement   | Delay   | LOS   | Avg QL | Max QL | WBLT | 87.3 | F | 12 | 106 | WBTH | 23.6 | C | 53 | 296 | WBRT | 25.0 | C | 53 | 296 | EBLT | 60.9 | E | 932 | 1588 | EBTH | 54.6 | D | 932 | 1588 | EBRT | 44.0 | D | 933 | 1589 | NBLT | 46.6 | D | 12 | 101 | NBTH | 44.3 | D | 12 | 101 | NBRT | 16.4 | B | 1 | 56 | SBLT | 61.1 | E | 34 | 364 | SBTH | 52.8 | D | 34 | 364 | SBRT | 51.3 | D | 130 | 524 | Intersection | <b>45.1</b> | <b>D</b> |  |  | <table border="1"> <thead> <tr> <th>Movement</th> <th>Delay</th> <th>LOS</th> <th>Avg QL</th> <th>Max QL</th> </tr> </thead> <tbody> <tr><td>WBLT</td><td>70.6</td><td>E</td><td>10</td><td>141</td></tr> <tr><td>WBTH</td><td>25.9</td><td>C</td><td>60</td><td>319</td></tr> <tr><td>WBRT</td><td>25.4</td><td>C</td><td>60</td><td>319</td></tr> <tr><td>EBLT</td><td>54.5</td><td>D</td><td>537</td><td>1505</td></tr> <tr><td>EBTH</td><td>42.6</td><td>D</td><td>537</td><td>1505</td></tr> <tr><td>EBRT</td><td>36.1</td><td>D</td><td>537</td><td>1506</td></tr> <tr><td>NBLT</td><td>52.5</td><td>D</td><td>14</td><td>107</td></tr> <tr><td>NBTH</td><td>55.3</td><td>E</td><td>14</td><td>107</td></tr> <tr><td>NBRT</td><td>18.9</td><td>B</td><td>1</td><td>61</td></tr> <tr><td>SBLT</td><td>62.2</td><td>E</td><td>36</td><td>371</td></tr> <tr><td>SBTH</td><td>60.9</td><td>E</td><td>36</td><td>371</td></tr> <tr><td>SBRT</td><td>39.3</td><td>D</td><td>90</td><td>481</td></tr> <tr><td>Intersection</td><td><b>38.8</b></td><td><b>D</b></td><td></td><td></td></tr> </tbody> </table> | Movement | Delay | LOS | Avg QL | Max QL | WBLT | 70.6 | E | 10 | 141 | WBTH | 25.9 | C | 60 | 319 | WBRT | 25.4 | C | 60 | 319 | EBLT | 54.5 | D | 537 | 1505 | EBTH | 42.6 | D | 537 | 1505 | EBRT | 36.1 | D | 537 | 1506 | NBLT | 52.5 | D | 14 | 107 | NBTH | 55.3 | E | 14 | 107 | NBRT | 18.9 | B | 1 | 61 | SBLT | 62.2 | E | 36 | 371 | SBTH | 60.9 | E | 36 | 371 | SBRT | 39.3 | D | 90 | 481 | Intersection | <b>38.8</b> | <b>D</b> |  |  | <table border="1"> <thead> <tr> <th>Movement</th> <th>Delay</th> <th>LOS</th> <th>Avg QL</th> <th>Max QL</th> </tr> </thead> <tbody> <tr><td>WBLT</td><td>28.1</td><td>C</td><td>2</td><td>47</td></tr> <tr><td>WBTH</td><td>8.3</td><td>A</td><td>19</td><td>191</td></tr> <tr><td>WBRT</td><td>6.2</td><td>A</td><td>18</td><td>192</td></tr> <tr><td>EBLT</td><td>20.5</td><td>C</td><td>68</td><td>693</td></tr> <tr><td>EBTH</td><td>12.3</td><td>B</td><td>68</td><td>693</td></tr> <tr><td>EBRT</td><td>9.3</td><td>A</td><td>67</td><td>694</td></tr> <tr><td>NBLT</td><td>46.4</td><td>D</td><td>12</td><td>93</td></tr> <tr><td>NBTH</td><td>43.8</td><td>D</td><td>12</td><td>93</td></tr> <tr><td>NBRT</td><td>18.7</td><td>B</td><td>12</td><td>96</td></tr> <tr><td>SBLT</td><td>46.9</td><td>D</td><td>25</td><td>194</td></tr> <tr><td>SBTH</td><td>42.0</td><td>D</td><td>25</td><td>194</td></tr> <tr><td>SBRT</td><td>4.6</td><td>A</td><td>3</td><td>125</td></tr> <tr><td>Intersection</td><td><b>12.6</b></td><td><b>B</b></td><td></td><td></td></tr> </tbody> </table> | Movement | Delay | LOS | Avg QL | Max QL | WBLT | 28.1 | C | 2 | 47 | WBTH | 8.3 | A | 19 | 191 | WBRT | 6.2 | A | 18 | 192 | EBLT | 20.5 | C | 68 | 693 | EBTH | 12.3 | B | 68 | 693 | EBRT | 9.3 | A | 67 | 694 | NBLT | 46.4 | D | 12 | 93 | NBTH | 43.8 | D | 12 | 93 | NBRT | 18.7 | B | 12 | 96 | SBLT | 46.9 | D | 25 | 194 | SBTH | 42.0 | D | 25 | 194 | SBRT | 4.6 | A | 3 | 125 | Intersection | <b>12.6</b> | <b>B</b> |  |  | <table border="1"> <thead> <tr> <th>Movement</th> <th>Delay</th> <th>LOS</th> <th>Avg QL</th> <th>Max QL</th> </tr> </thead> <tbody> <tr><td>WBLT</td><td>36.0</td><td>D</td><td>4</td><td>63</td></tr> <tr><td>WBTH</td><td>12.4</td><td>B</td><td>28</td><td>201</td></tr> <tr><td>WBRT</td><td>13.8</td><td>B</td><td>28</td><td>201</td></tr> <tr><td>EBLT</td><td>26.4</td><td>C</td><td>104</td><td>741</td></tr> <tr><td>EBTH</td><td>17.1</td><td>B</td><td>104</td><td>741</td></tr> <tr><td>EBRT</td><td>16.0</td><td>B</td><td>104</td><td>741</td></tr> <tr><td>NBLT</td><td>42.2</td><td>D</td><td>12</td><td>95</td></tr> <tr><td>NBTH</td><td>43.5</td><td>D</td><td>12</td><td>95</td></tr> <tr><td>NBRT</td><td>37.5</td><td>D</td><td>12</td><td>95</td></tr> <tr><td>SBLT</td><td>54.8</td><td>D</td><td>27</td><td>304</td></tr> <tr><td>SBTH</td><td>44.8</td><td>D</td><td>27</td><td>304</td></tr> <tr><td>SBRT</td><td>46.3</td><td>D</td><td>108</td><td>533</td></tr> <tr><td>Intersection</td><td><b>21.3</b></td><td><b>C</b></td><td></td><td></td></tr> </tbody> </table> | Movement | Delay | LOS | Avg QL | Max QL | WBLT | 36.0 | D | 4 | 63 | WBTH | 12.4 | B | 28 | 201 | WBRT | 13.8 | B | 28 | 201 | EBLT | 26.4 | C | 104 | 741 | EBTH | 17.1 | B | 104 | 741 | EBRT | 16.0 | B | 104 | 741 | NBLT | 42.2 | D | 12 | 95 | NBTH | 43.5 | D | 12 | 95 | NBRT | 37.5 | D | 12 | 95 | SBLT | 54.8 | D | 27 | 304 | SBTH | 44.8 | D | 27 | 304 | SBRT | 46.3 | D | 108 | 533 | Intersection | <b>21.3</b> | <b>C</b> |  |  |
| Movement             | Delay   | LOS  | Avg QL  | Max QL  |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| WBLT                 | 87.3  | F  | 12  | 106   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| WBTH                 | 23.6  | C  | 53  | 296   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| WBRT                 | 25.0  | C  | 53  | 296   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| EBLT                 | 60.9  | E  | 932   | 1588  |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| EBTH                 | 54.6  | D  | 932   | 1588  |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| EBRT                 | 44.0  | D  | 933   | 1589  |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| NBLT                 | 46.6  | D  | 12  | 101   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| NBTH                 | 44.3  | D  | 12  | 101   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| NBRT                 | 16.4  | B  | 1   | 56  |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| SBLT                 | 61.1  | E  | 34  | 364   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| SBTH                 | 52.8  | D  | 34  | 364   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| SBRT                 | 51.3  | D  | 130   | 524   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| Intersection         | <b>45.1</b>   | <b>D</b>   |   |   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| Movement             | Delay   | LOS  | Avg QL  | Max QL  |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| WBLT                 | 70.6  | E  | 10  | 141   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| WBTH                 | 25.9  | C  | 60  | 319   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| WBRT                 | 25.4  | C  | 60  | 319   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| EBLT                 | 54.5  | D  | 537   | 1505  |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| EBTH                 | 42.6  | D  | 537   | 1505  |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| EBRT                 | 36.1  | D  | 537   | 1506  |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| NBLT                 | 52.5  | D  | 14  | 107   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| NBTH                 | 55.3  | E  | 14  | 107   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| NBRT                 | 18.9  | B  | 1   | 61  |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| SBLT                 | 62.2  | E  | 36  | 371   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| SBTH                 | 60.9  | E  | 36  | 371   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| SBRT                 | 39.3  | D  | 90  | 481   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| Intersection         | <b>38.8</b>   | <b>D</b>   |   |   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| Movement             | Delay   | LOS  | Avg QL  | Max QL  |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| WBLT                 | 28.1  | C  | 2   | 47  |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| WBTH                 | 8.3   | A  | 19  | 191   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| WBRT                 | 6.2   | A  | 18  | 192   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| EBLT                 | 20.5  | C  | 68  | 693   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| EBTH                 | 12.3  | B  | 68  | 693   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| EBRT                 | 9.3   | A  | 67  | 694   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| NBLT                 | 46.4  | D  | 12  | 93  |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| NBTH                 | 43.8  | D  | 12  | 93  |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| NBRT                 | 18.7  | B  | 12  | 96  |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| SBLT                 | 46.9  | D  | 25  | 194   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| SBTH                 | 42.0  | D  | 25  | 194   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| SBRT                 | 4.6   | A  | 3   | 125   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| Intersection         | <b>12.6</b>   | <b>B</b>   |   |   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| Movement             | Delay   | LOS  | Avg QL  | Max QL  |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| WBLT                 | 36.0  | D  | 4   | 63  |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| WBTH                 | 12.4  | B  | 28  | 201   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| WBRT                 | 13.8  | B  | 28  | 201   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| EBLT                 | 26.4  | C  | 104   | 741   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| EBTH                 | 17.1  | B  | 104   | 741   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| EBRT                 | 16.0  | B  | 104   | 741   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| NBLT                 | 42.2  | D  | 12  | 95  |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| NBTH                 | 43.5  | D  | 12  | 95  |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| NBRT                 | 37.5  | D  | 12  | 95  |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| SBLT                 | 54.8  | D  | 27  | 304   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| SBTH                 | 44.8  | D  | 27  | 304   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| SBRT                 | 46.3  | D  | 108   | 533   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |
| Intersection         | <b>21.3</b>   | <b>C</b>   |   |   |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |      |      |   |     |      |      |      |   |     |      |      |      |   |     |      |      |      |   |    |     |      |      |   |    |     |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |    |     |              |             |          |  |  |  |          |       |     |        |        |      |      |   |   |    |      |     |   |    |     |      |     |   |    |     |      |      |   |    |     |      |      |   |    |     |      |     |   |    |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |     |   |   |     |              |             |          |  |  |   |          |       |     |        |        |      |      |   |   |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |      |      |   |     |     |      |      |   |     |     |      |      |   |    |    |      |      |   |    |    |      |      |   |    |    |      |      |   |    |     |      |      |   |    |     |      |      |   |     |     |              |             |          |  |  |

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**C Appendix C: Existing 2010 Lanes, Timings & Phasing (Synchro)**

The following pages are analysis reports generated by Synchro.





Lanes and Geometrics

1: N Pickett St/N Pickett St/Fire Station & Seminary Rd

Existing 2010

AM PEAK

| Lane Group          | EBL  | EBT   | EBR  | WBL  | WBT   | WBR  | NBL  | NBT  | NBR   | SBL  | SBT   | SBR  |
|---------------------|------|-------|------|------|-------|------|------|------|-------|------|-------|------|
| Lane Configurations |      | ↔     |      |      | ↔     |      |      | ↕    | ↕     |      | ↕     |      |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12   | 12    | 12   | 12    | 12   |
| Grade (%)           |      | 0%    |      |      | 0%    |      |      | 0%   |       |      | 0%    |      |
| Storage Length (ft) | 0    |       | 0    | 0    |       | 0    | 0    |      | 50    | 0    |       | 0    |
| Storage Lanes       | 0    |       | 0    | 0    |       | 0    | 0    |      | 1     | 0    |       | 0    |
| Taper Length (ft)   | 50   |       |      | 50   |       |      | 50   |      |       | 50   |       |      |
| Lane Util. Factor   | 0.95 | 0.95  | 0.95 | 0.95 | 0.95  | 0.95 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 |
| Ped Bike Factor     |      |       |      |      |       |      |      |      | 0.98  |      |       |      |
| Frt                 |      | 0.978 |      |      |       |      |      |      | 0.850 |      | 0.865 |      |
| Flt Protected       |      |       |      |      | 0.997 |      |      |      | 0.950 |      |       |      |
| Satd. Flow (prot)   | 0    | 3461  | 0    | 0    | 3529  | 0    | 0    | 1770 | 1583  | 0    | 1611  | 0    |
| Flt Permitted       |      |       |      |      | 0.652 |      |      |      | 0.160 |      |       |      |
| Satd. Flow (perm)   | 0    | 3461  | 0    | 0    | 2308  | 0    | 0    | 298  | 1556  | 0    | 1611  | 0    |
| Right Turn on Red   |      |       | Yes  |      |       | Yes  |      |      | Yes   |      |       | Yes  |
| Satd. Flow (RTOR)   |      | 21    |      |      |       |      |      |      | 99    |      |       | 178  |
| Link Speed (mph)    |      | 35    |      |      | 35    |      |      |      | 25    |      |       | 25   |
| Link Distance (ft)  |      | 295   |      |      | 759   |      |      |      | 843   |      |       | 257  |
| Travel Time (s)     |      | 5.7   |      |      | 14.8  |      |      |      | 23.0  |      |       | 7.0  |

Intersection Summary

Area Type: Other

Timings

1: N Pickett St/N Pickett St/Fire Station & Seminary Rd

Existing 2010

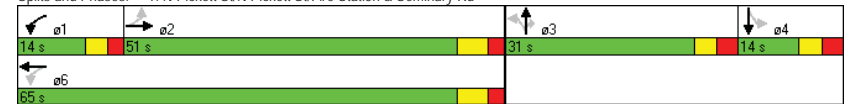
AM PEAK

| Lane Group           | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     |       | ↔     |       | ↕     | ↕     | ↕     |
| Volume (vph)         | 655   | 90    | 1205  | 140   | 0     | 110   | 0     |
| Turn Type            | NA    | pm+pt | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 2     | 1     | 6     | 3     | 3     | 3     | 4     |
| Permitted Phases     |       | 6     |       | 3     |       | 3     |       |
| Detector Phase       | 2     | 1     | 6     | 3     | 3     | 3     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 10.0  | 5.0   | 10.0  | 7.0   | 7.0   | 7.0   | 5.0   |
| Minimum Split (s)    | 46.5  | 10.0  | 16.5  | 31.0  | 31.0  | 31.0  | 11.0  |
| Total Split (s)      | 51.0  | 14.0  | 65.0  | 31.0  | 31.0  | 31.0  | 14.0  |
| Total Split (%)      | 46.4% | 12.7% | 59.1% | 28.2% | 28.2% | 28.2% | 12.7% |
| Yellow Time (s)      | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.5   | 2.0   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.5   | 5.0   | 6.5   | 6.0   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             | Lag   | Lead  |       | Lead  | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |
| Recall Mode          | C-Max | Max   | C-Max | None  | None  | None  | None  |
| Act Effct Green (s)  | 44.5  |       | 70.2  |       | 25.0  | 25.0  | 5.5   |
| Actuated g/C Ratio   | 0.40  |       | 0.64  |       | 0.23  | 0.23  | 0.05  |
| v/c Ratio            | 0.58  |       | 0.83  |       | 2.22  | 0.27  | 0.04  |
| Control Delay        | 23.9  |       | 15.1  |       | 617.3 | 11.6  | 0.3   |
| Queue Delay          | 1.6   |       | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Total Delay          | 25.4  |       | 15.1  |       | 617.3 | 11.6  | 0.3   |
| LOS                  | C     |       | B     |       | F     | B     | A     |
| Approach Delay       | 25.4  |       | 15.1  |       | 351.6 |       | 0.3   |
| Approach LOS         | C     |       | B     |       | F     |       | A     |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 80 (73%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.22  
 Intersection Signal Delay: 54.7  
 Intersection LOS: D  
 Intersection Capacity Utilization 88.6%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 1: N Pickett St/N Pickett St/Fire Station & Seminary Rd



Phasings

1: N Pickett St/N Pickett St/Fire Station & Seminary Rd

Existing 2010  
AM PEAK

|                         | →     | ↖     | ←     | ↙     | ↑     | ↗     | ↓     |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group              | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBT   |
| Protected Phases        | 2     | 1     | 6     |       | 3     |       | 4     |
| Permitted Phases        |       | 6     |       | 3     |       | 3     |       |
| Minimum Initial (s)     | 10.0  | 5.0   | 10.0  | 7.0   | 7.0   | 7.0   | 5.0   |
| Minimum Split (s)       | 46.5  | 10.0  | 16.5  | 31.0  | 31.0  | 31.0  | 11.0  |
| Total Split (s)         | 51.0  | 14.0  | 65.0  | 31.0  | 31.0  | 31.0  | 14.0  |
| Total Split (%)         | 46.4% | 12.7% | 59.1% | 28.2% | 28.2% | 28.2% | 12.7% |
| Maximum Green (s)       | 44.5  | 9.0   | 58.5  | 25.0  | 25.0  | 25.0  | 8.0   |
| Yellow Time (s)         | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.5   | 2.0   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lag   | Lead  |       | Lead  | Lead  | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 4.0   | 4.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 4.0   | 4.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | C-Max | Max   | C-Max | None  | None  | None  | None  |
| Walk Time (s)           | 22.0  |       |       | 7.0   | 7.0   | 7.0   |       |
| Flash Dont Walk (s)     | 18.0  |       |       | 18.0  | 18.0  | 18.0  |       |
| Pedestrian Calls (#/hr) | 0     |       |       | 0     | 0     | 0     |       |
| 90th %ile Green (s)     | 44.5  | 11.5  | 61.0  | 25.0  | 25.0  | 25.0  | 5.5   |
| 90th %ile Term Code     | Coord | MaxR  | Coord | Max   | Max   | Max   | Gap   |
| 70th %ile Green (s)     | 44.5  | 23.0  | 72.5  | 25.0  | 25.0  | 25.0  | 0.0   |
| 70th %ile Term Code     | Coord | MaxR  | Coord | Max   | Max   | Max   | Skip  |
| 50th %ile Green (s)     | 44.5  | 23.0  | 72.5  | 25.0  | 25.0  | 25.0  | 0.0   |
| 50th %ile Term Code     | Coord | MaxR  | Coord | Max   | Max   | Max   | Skip  |
| 30th %ile Green (s)     | 44.5  | 23.0  | 72.5  | 25.0  | 25.0  | 25.0  | 0.0   |
| 30th %ile Term Code     | Coord | MaxR  | Coord | Max   | Max   | Max   | Skip  |
| 10th %ile Green (s)     | 44.5  | 23.0  | 72.5  | 25.0  | 25.0  | 25.0  | 0.0   |
| 10th %ile Term Code     | Coord | MaxR  | Coord | Max   | Max   | Max   | Skip  |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 80 (73%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

2: I-395 NB Off-Ramp & Seminary Rd (S)

Existing 2010  
AM PEAK

|                     | ↖     | →     | ↘    | ↙    | ←    | ↖    | ↙    | ↑    | ↗     | ↘    | ↓    | ↙    |
|---------------------|-------|-------|------|------|------|------|------|------|-------|------|------|------|
| Lane Group          | EBL   | EBT   | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR   | SBL  | SBT  | SBR  |
| Lane Configurations | ↖ ↗   | ↖ ↗   |      |      |      |      |      | ↑    | ↖ ↗   |      |      |      |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           |       | 0%    |      |      | 0%   |      |      | 0%   |       |      | 0%   |      |
| Storage Length (ft) | 0     |       | 0    | 0    |      | 0    | 0    |      | 630   | 0    |      | 0    |
| Storage Lanes       | 1     |       | 0    | 0    |      | 0    | 0    |      | 1     | 0    |      | 0    |
| Taper Length (ft)   | 50    |       |      | 50   |      |      | 50   |      | 50    |      |      | 50   |
| Lane Util. Factor   | 0.91  | 0.91  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor     |       |       |      |      |      |      |      |      |       |      |      |      |
| Friction            |       |       |      |      |      |      |      |      | 0.850 |      |      |      |
| Flt Protected       | 0.950 | 0.975 |      |      |      |      |      |      | 1863  | 1583 | 0    | 0    |
| Satd. Flow (prot)   | 1610  | 3305  | 0    | 0    | 0    | 0    | 0    | 1863 | 1583  | 0    | 0    | 0    |
| Flt Permitted       | 0.950 | 0.975 |      |      |      |      |      |      |       |      |      |      |
| Satd. Flow (perm)   | 1610  | 3305  | 0    | 0    | 0    | 0    | 0    | 1863 | 1583  | 0    | 0    | 0    |
| Right Turn on Red   | Yes   |       | Yes  |      |      | Yes  |      |      | Yes   |      |      | Yes  |
| Satd. Flow (RTOR)   | 23    | 23    |      |      |      |      |      |      | 180   |      |      |      |
| Link Speed (mph)    |       | 35    |      |      | 35   |      |      |      | 35    |      |      | 35   |
| Link Distance (ft)  |       | 349   |      |      | 315  |      |      |      | 1292  |      |      | 294  |
| Travel Time (s)     |       | 6.8   |      |      | 6.1  |      |      |      | 25.2  |      |      | 5.7  |

Intersection Summary

Area Type: Other

Timings  
2: I-395 NB Off-Ramp & Seminary Rd (S)

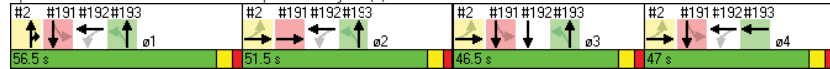
Existing 2010  
AM PEAK

| Lane Group           | EBL   | EBT   | NBT   | NBR   | ø2   | ø3   | ø4   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  |       |       |       |       |      |      |      |
| Volume (vph)         | 760   | 360   | 685   | 195   |      |      |      |
| Turn Type            | Perm  | NA    | NA    | Prot  |      |      |      |
| Protected Phases     | 2 3 4 | 1     | 1     | 2     | 3    | 4    |      |
| Permitted Phases     | 2 3 4 |       |       |       |      |      |      |
| Detector Phase       | 2 3 4 | 2 3 4 | 1     | 1     |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  |       |       | 10.0  | 10.0  | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    |       |       | 22.5  | 22.5  | 22.5 | 22.5 | 23.0 |
| Total Split (s)      | 145.0 | 145.0 | 56.5  | 56.5  | 51.5 | 46.5 | 47.0 |
| Total Split (%)      | 72.0% | 72.0% | 28.0% | 28.0% | 26%  | 23%  | 23%  |
| Yellow Time (s)      |       |       | 4.0   | 4.0   | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     |       |       | 2.5   | 2.5   | 2.5  | 2.5  | 3.0  |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | -2.5  |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             |       |       | Lead  | Lead  | Lag  | Lead | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          |       |       | Min   | Min   | Min  | Min  | Min  |
| Act Effct Green (s)  | 139.6 | 139.6 | 52.5  | 52.5  |      |      |      |
| Actuated g/C Ratio   | 0.70  | 0.70  | 0.26  | 0.26  |      |      |      |
| v/c Ratio            | 0.36  | 0.34  | 1.51  | 0.38  |      |      |      |
| Control Delay        | 2.4   | 1.3   | 285.0 | 13.2  |      |      |      |
| Queue Delay          | 2.4   | 1.1   | 0.0   | 0.0   |      |      |      |
| Total Delay          | 4.8   | 2.4   | 285.0 | 13.2  |      |      |      |
| LOS                  | A     | A     | F     | B     |      |      |      |
| Approach Delay       |       | 3.2   | 224.8 |       |      |      |      |
| Approach LOS         |       | A     | F     |       |      |      |      |

Intersection Summary

|   |
|---|
| Cycle Length: 201.5                     |
| Actuated Cycle Length: 200.1            |
| Natural Cycle: 125                      |
| Control Type: Actuated-Uncoordinated    |
| Maximum v/c Ratio: 1.51                 |
| Intersection Signal Delay: 100.7        |
| Intersection Capacity Utilization 68.6% |
| Analysis Period (min) 15                |
| Intersection LOS: F                     |
| ICU Level of Service C                  |

Splits and Phases: 2: I-395 NB Off-Ramp & Seminary Rd (S)



Phasings  
2: I-395 NB Off-Ramp & Seminary Rd (S)

Existing 2010  
AM PEAK

| Lane Group              | EBL   | EBT   | NBT   | NBR   | ø2   | ø3   | ø4   |
|-------------------------|-------|-------|-------|-------|------|------|------|
| Protected Phases        | 2 3 4 |       | 1     | 1     | 2    | 3    | 4    |
| Permitted Phases        | 2 3 4 |       |       |       |      |      |      |
| Minimum Initial (s)     |       |       | 10.0  | 10.0  | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       |       |       | 22.5  | 22.5  | 22.5 | 22.5 | 23.0 |
| Total Split (s)         | 145.0 | 145.0 | 56.5  | 56.5  | 51.5 | 46.5 | 47.0 |
| Total Split (%)         | 72.0% | 72.0% | 28.0% | 28.0% | 26%  | 23%  | 23%  |
| Maximum Green (s)       |       |       | 50.0  | 50.0  | 45.0 | 40.0 | 40.0 |
| Yellow Time (s)         |       |       | 4.0   | 4.0   | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        |       |       | 2.5   | 2.5   | 2.5  | 2.5  | 3.0  |
| Lead/Lag                |       |       | Lead  | Lead  | Lag  | Lead | Lag  |
| Lead-Lag Optimize?      |       |       |       |       |      |      |      |
| Vehicle Extension (s)   |       |       | 5.0   | 5.0   | 3.0  | 3.0  | 3.0  |
| Minimum Gap (s)         |       |       | 5.0   | 5.0   | 3.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  |       |       | 0.0   | 0.0   | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      |       |       | 0.0   | 0.0   | 0.0  | 0.0  | 0.0  |
| Recall Mode             |       |       | Min   | Min   | Min  | Min  | Min  |
| Walk Time (s)           |       |       |       |       |      |      |      |
| Flash Dont Walk (s)     |       |       |       |       |      |      |      |
| Pedestrian Calls (#/hr) |       |       |       |       |      |      |      |
| 90th %ile Green (s)     |       |       | 50.0  | 50.0  | 45.0 | 40.0 | 40.0 |
| 90th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 70th %ile Green (s)     |       |       | 50.0  | 50.0  | 45.0 | 40.0 | 40.0 |
| 70th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 50th %ile Green (s)     |       |       | 50.0  | 50.0  | 45.0 | 40.0 | 40.0 |
| 50th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 30th %ile Green (s)     |       |       | 50.0  | 50.0  | 45.0 | 40.0 | 40.0 |
| 30th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 10th %ile Green (s)     |       |       | 50.0  | 50.0  | 45.0 | 36.3 | 36.6 |
| 10th %ile Term Code     |       |       | Max   | Max   | Max  | Gap  | Gap  |

Intersection Summary

|                                      |
|--------------------------------------|
| Cycle Length: 201.5                  |
| Actuated Cycle Length: 200.1         |
| Control Type: Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: 201.5      |
| 70th %ile Actuated Cycle: 201.5      |
| 50th %ile Actuated Cycle: 201.5      |
| 30th %ile Actuated Cycle: 201.5      |
| 10th %ile Actuated Cycle: 194.4      |

Lanes and Geometrics  
3: Seminary Rd (S)/Seminary Rd (N) & Seminary Rd

Existing 2010  
AM PEAK

| Lane Group          | EBL  | EBT  | EBR   | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR   |
|---------------------|------|------|-------|------|------|------|------|------|------|------|------|-------|
| Lane Configurations |      | ↑↑   | ↑↑    |      | ↑↑   |      |      |      |      |      |      | ↑     |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12   | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12    |
| Grade (%)           |      | 0%   |       |      | 0%   |      |      | 0%   |      |      | 0%   |       |
| Storage Length (ft) | 0    |      | 0     | 0    |      | 0    | 0    |      | 0    | 0    |      | 0     |
| Storage Lanes       | 0    |      | 2     | 0    |      | 0    | 0    |      | 0    | 0    |      | 1     |
| Taper Length (ft)   | 50   |      |       | 50   |      |      | 50   |      |      | 50   |      |       |
| Lane Util. Factor   | 1.00 | 0.95 | 0.88  | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  |
| Ped Bike Factor     |      |      |       |      |      |      |      |      |      |      |      |       |
| Frt                 |      |      | 0.850 |      |      |      |      |      |      |      |      | 0.865 |
| Flt Protected       |      |      |       |      |      |      |      |      |      |      |      |       |
| Satd. Flow (prot)   | 0    | 3539 | 2787  | 0    | 3539 | 0    | 0    | 0    | 0    | 0    | 0    | 1611  |
| Flt Permitted       |      |      |       |      |      |      |      |      |      |      |      |       |
| Satd. Flow (perm)   | 0    | 3539 | 2787  | 0    | 3539 | 0    | 0    | 0    | 0    | 0    | 0    | 1611  |
| Link Speed (mph)    |      | 35   |       |      | 35   |      |      | 35   |      |      | 35   |       |
| Link Distance (ft)  |      | 489  |       |      | 1551 |      |      | 213  |      |      | 259  |       |
| Travel Time (s)     |      | 9.5  |       |      | 30.2 |      |      | 4.1  |      |      | 5.0  |       |

**Intersection Summary**  
Area Type: Other

Lanes and Geometrics  
7: Beauregard St/S Walter Reed Dr & King St

Existing 2010  
AM PEAK


| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT  | SBR   |
|---------------------|-------|-------|------|-------|-------|------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↑     | ↑↑    |      | ↑     | ↑↑    |      |       | ↑↑    | ↑↑   |       | ↑↑   | ↑     |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12   | 12    |
| Grade (%)           |       | 0%    |      |       | 0%    |      |       | 0%    |      |       | 0%   |       |
| Storage Length (ft) | 250   |       | 0    | 360   |       | 0    | 515   |       | 0    | 165   |      | 165   |
| Storage Lanes       | 1     |       | 0    | 1     |       | 0    | 2     |       | 0    | 1     |      | 1     |
| Taper Length (ft)   | 50    |       |      | 50    |       |      | 50    |       |      | 50    |      |       |
| Lane Util. Factor   | 1.00  | 0.95  | 0.95 | 1.00  | 0.95  | 0.95 | 0.97  | 0.95  | 0.95 | 1.00  | 0.95 | 1.00  |
| Ped Bike Factor     |       | 1.00  |      |       | 1.00  |      |       | 1.00  |      |       |      | 0.98  |
| Frt                 |       | 0.990 |      |       | 0.986 |      |       | 0.976 |      |       |      | 0.850 |
| Flt Protected       | 0.950 |       |      | 0.950 |       |      | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (prot)   | 1770  | 3497  | 0    | 1770  | 3482  | 0    | 3433  | 3439  | 0    | 1770  | 3539 | 1583  |
| Flt Permitted       | 0.076 |       |      | 0.138 |       |      | 0.950 |       |      | 0.175 |      |       |
| Satd. Flow (perm)   | 142   | 3497  | 0    | 257   | 3482  | 0    | 3433  | 3439  | 0    | 326   | 3539 | 1554  |
| Right Turn on Red   |       |       | Yes  |       |       | Yes  |       |       | Yes  |       |      | Yes   |
| Satd. Flow (RTOR)   |       | 8     |      |       | 11    |      |       |       | 20   |       |      | 120   |
| Link Speed (mph)    |       | 35    |      |       | 35    |      |       | 35    |      |       | 35   |       |
| Link Distance (ft)  |       | 1357  |      |       | 1477  |      |       | 1463  |      |       | 1148 |       |
| Travel Time (s)     |       | 26.4  |      |       | 28.8  |      |       | 28.5  |      |       | 22.4 |       |

**Intersection Summary**  
Area Type: Other

Timings

7: Beauregard St/S Walter Reed Dr & King St

Existing 2010  
AM PEAK

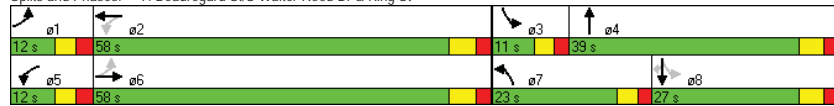


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     |
| Volume (vph)         | 105   | 955   | 65    | 1450  | 345   | 640   | 110   | 130   | 140   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Prot  | NA    | pm+pt | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases     | 6     |       | 2     |       |       |       | 8     |       | 8     |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 10.0  | 4.0   | 10.0  | 6.5   | 7.0   | 3.5   | 7.0   | 7.0   |
| Minimum Split (s)    | 9.5   | 22.5  | 9.5   | 22.5  | 12.0  | 21.5  | 9.0   | 21.5  | 21.5  |
| Total Split (s)      | 12.0  | 58.0  | 12.0  | 58.0  | 23.0  | 39.0  | 11.0  | 27.0  | 27.0  |
| Total Split (%)      | 10.0% | 48.3% | 10.0% | 48.3% | 19.2% | 32.5% | 9.2%  | 22.5% | 22.5% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.5   | 3.0   | 3.5   | 3.5   |
| All-Red Time (s)     | 2.5   | 2.5   | 2.5   | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | -5.0  | -5.0  | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.5   | 6.5   | 5.5   | 6.5   | 0.0   | 0.5   | 5.0   | 5.5   | 5.5   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | Max   | None  | Max   | Max   |
| Act Effct Green (s)  | 60.1  | 53.9  | 58.9  | 51.5  | 21.7  | 38.5  | 29.3  | 22.8  | 22.8  |
| Actuated g/C Ratio   | 0.50  | 0.45  | 0.49  | 0.43  | 0.18  | 0.32  | 0.24  | 0.19  | 0.19  |
| v/c Ratio            | 0.71  | 0.70  | 0.34  | 1.15  | 0.60  | 0.74  | 0.78  | 0.21  | 0.39  |
| Control Delay        | 43.8  | 30.0  | 18.2  | 106.6 | 37.7  | 42.4  | 62.8  | 42.5  | 15.1  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 43.8  | 30.0  | 18.2  | 106.6 | 37.7  | 42.4  | 62.8  | 42.5  | 15.1  |
| LOS                  | D     | C     | B     | F     | D     | D     | E     | D     | B     |
| Approach Delay       |       | 31.3  |       | 103.1 |       | 40.9  |       | 38.3  |       |
| Approach LOS         |       | C     |       | F     |       | D     |       | D     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 90 (75%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.15  
 Intersection Signal Delay: 62.3  
 Intersection LOS: E  
 Intersection Capacity Utilization 96.1%  
 ICU Level of Service F  
 Analysis Period (min) 15


Splits and Phases: 7: Beauregard St/S Walter Reed Dr & King St



Phasings

7: Beauregard St/S Walter Reed Dr & King St

Existing 2010  
AM PEAK



| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL  | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| Protected Phases        | 1     | 6     | 5     | 2     | 7     | 4     | 3    | 8     |       |
| Permitted Phases        | 6     |       | 2     |       |       |       | 8    |       | 8     |
| Minimum Initial (s)     | 4.0   | 10.0  | 4.0   | 10.0  | 6.5   | 7.0   | 3.5  | 7.0   | 7.0   |
| Minimum Split (s)       | 9.5   | 22.5  | 9.5   | 22.5  | 12.0  | 21.5  | 9.0  | 21.5  | 21.5  |
| Total Split (s)         | 12.0  | 58.0  | 12.0  | 58.0  | 23.0  | 39.0  | 11.0 | 27.0  | 27.0  |
| Total Split (%)         | 10.0% | 48.3% | 10.0% | 48.3% | 19.2% | 32.5% | 9.2% | 22.5% | 22.5% |
| Maximum Green (s)       | 6.5   | 51.5  | 6.5   | 51.5  | 18.0  | 33.5  | 6.0  | 21.5  | 21.5  |
| Yellow Time (s)         | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.5   | 3.0  | 3.5   | 3.5   |
| All-Red Time (s)        | 2.5   | 2.5   | 2.5   | 2.5   | 2.0   | 2.0   | 2.0  | 2.0   | 2.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead | Lag   | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |      |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   |
| Recall Mode             | None  | C-Max | None  | C-Max | None  | Max   | None | Max   | Max   |
| Walk Time (s)           | 4.0   |       | 4.0   |       | 4.0   |       | 4.0  |       | 4.0   |
| Flash Dont Walk (s)     | 12.0  |       | 12.0  |       | 12.0  |       | 12.0 |       | 12.0  |
| Pedestrian Calls (#/hr) | 0     |       | 0     |       | 0     |       | 0    |       | 0     |
| 90th %ile Green (s)     | 6.5   | 51.5  | 6.5   | 51.5  | 18.0  | 33.5  | 6.0  | 21.5  | 21.5  |
| 90th %ile Term Code     | Max   | Coord | Max   | Coord | Max   | MaxR  | Max  | MaxR  | MaxR  |
| 70th %ile Green (s)     | 6.5   | 51.5  | 6.5   | 51.5  | 18.0  | 33.5  | 6.0  | 21.5  | 21.5  |
| 70th %ile Term Code     | Max   | Coord | Max   | Coord | Max   | MaxR  | Max  | MaxR  | MaxR  |
| 50th %ile Green (s)     | 6.5   | 51.5  | 6.5   | 51.5  | 18.0  | 33.5  | 6.0  | 21.5  | 21.5  |
| 50th %ile Term Code     | Max   | Coord | Max   | Coord | Max   | MaxR  | Max  | MaxR  | MaxR  |
| 30th %ile Green (s)     | 6.5   | 51.5  | 6.5   | 51.5  | 16.2  | 33.5  | 6.0  | 23.3  | 23.3  |
| 30th %ile Term Code     | Max   | Coord | Max   | Coord | Gap   | MaxR  | Max  | MaxR  | MaxR  |
| 10th %ile Green (s)     | 6.5   | 63.5  | 0.0   | 51.5  | 13.5  | 33.5  | 6.0  | 26.0  | 26.0  |
| 10th %ile Term Code     | Max   | Coord | Skip  | Coord | Gap   | MaxR  | Max  | MaxR  | MaxR  |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 90 (75%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
9: Beauregard St & Braddock Rd

Existing 2010  
AM PEAK

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT   | WBR   | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|-------|------|-------|-------|-------|-------|------|-------|-------|-------|------|
| Lane Configurations | ↔     | ↕     | ↔    | ↔     | ↕     | ↔     | ↔     | ↕    | ↔     | ↔     | ↕     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12    | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           |       | -6%   |      |       | -4%   |       |       | -2%  |       |       | 2%    |      |
| Storage Length (ft) | 100   |       | 0    | 200   |       | 60    | 80    |      | 100   | 100   |       | 0    |
| Storage Lanes       | 1     |       | 0    | 1     |       | 1     | 1     |      | 1     | 1     |       | 0    |
| Taper Length (ft)   | 50    |       |      | 50    |       |       | 50    |      |       | 50    |       |      |
| Lane Util. Factor   | 1.00  | 0.95  | 0.95 | 0.91  | 0.91  | 1.00  | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 0.95 |
| Ped Bike Factor     |       |       |      |       |       |       |       |      |       |       | 0.99  |      |
| Frt                 |       | 0.939 |      |       |       | 0.850 |       |      | 0.850 |       | 0.974 |      |
| Flt Protected       | 0.950 |       |      | 0.950 | 0.974 |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (prot)   | 1823  | 3423  | 0    | 1643  | 3368  | 1615  | 1787  | 3575 | 1599  | 1752  | 3388  | 0    |
| Flt Permitted       | 0.950 |       |      | 0.950 | 0.974 |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (perm)   | 1823  | 3423  | 0    | 1643  | 3368  | 1615  | 1787  | 3575 | 1599  | 1752  | 3388  | 0    |
| Right Turn on Red   |       |       | Yes  |       |       | Yes   |       | Yes  |       |       | Yes   | Yes  |
| Satd. Flow (RTOR)   |       | 11    |      |       |       | 538   |       |      | 62    |       | 21    |      |
| Link Speed (mph)    |       | 35    |      |       | 35    |       |       | 35   |       |       | 35    |      |
| Link Distance (ft)  |       | 755   |      |       | 1885  |       |       | 1146 |       |       | 1463  |      |
| Travel Time (s)     |       | 14.7  |      |       | 36.7  |       |       | 22.3 |       |       | 28.5  |      |

Intersection Summary

Area Type: Other

Timings  
9: Beauregard St & Braddock Rd

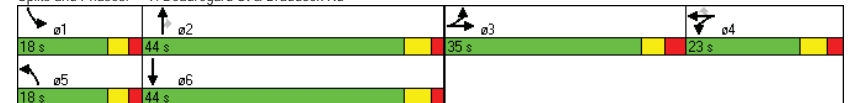
Existing 2010  
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↔     | ↔     | ↕     | ↔     | ↔     | ↕     |
| Volume (vph)         | 5     | 15    | 105   | 45    | 500   | 40    | 605   | 90    | 90    | 145   |
| Turn Type            | Split | NA    | Split | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 3     | 3     | 4     | 4     |       | 5     | 2     |       | 1     | 6     |
| Permitted Phases     |       |       |       |       | 4     |       |       | 2     |       |       |
| Detector Phase       | 3     | 3     | 4     | 4     | 4     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 6.0   | 10.0  | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)    | 31.5  | 31.5  | 22.5  | 22.5  | 22.5  | 11.0  | 26.0  | 26.0  | 11.0  | 26.0  |
| Total Split (s)      | 35.0  | 35.0  | 23.0  | 23.0  | 23.0  | 18.0  | 44.0  | 44.0  | 18.0  | 44.0  |
| Total Split (%)      | 29.2% | 29.2% | 19.2% | 19.2% | 19.2% | 15.0% | 36.7% | 36.7% | 15.0% | 36.7% |
| Yellow Time (s)      | 3.5   | 3.5   | 4.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 2.5   | 2.5   | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | -2.5  | 0.0   | -1.0  | -2.0  | 0.0   | -1.0  | -2.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 6.5   | 4.0   | 6.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lead  | Lag   | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       | C-Max | C-Max | None  | C-Max |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |
| Act Effct Green (s)  | 13.1  | 13.1  | 12.8  | 12.8  | 10.3  | 9.5   | 71.4  | 69.4  | 12.1  | 76.2  |
| Actuated g/C Ratio   | 0.11  | 0.11  | 0.11  | 0.11  | 0.09  | 0.08  | 0.60  | 0.58  | 0.10  | 0.64  |
| v/c Ratio            | 0.03  | 0.07  | 0.32  | 0.29  | 0.85  | 0.30  | 0.31  | 0.10  | 0.55  | 0.09  |
| Control Delay        | 42.8  | 30.5  | 53.1  | 50.4  | 18.3  | 67.5  | 6.9   | 1.6   | 67.0  | 8.6   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 42.8  | 30.5  | 53.1  | 50.4  | 18.3  | 67.5  | 6.9   | 1.6   | 67.0  | 8.6   |
| LOS                  | D     | C     | D     | D     | B     | E     | A     | A     | E     | A     |
| Approach Delay       |       | 32.4  |       | 25.9  |       |       | 9.6   |       |       | 28.5  |
| Approach LOS         |       | C     |       | C     |       |       | A     |       |       | C     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 47 (39%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 95  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 19.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 65.6%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 9: Beauregard St & Braddock Rd



Phasings  
9: Beauregard St & Braddock Rd

Existing 2010  
AM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 3     | 3     | 4     | 4     |       | 5     | 2     |       | 1     | 6     |
| Permitted Phases        |       |       |       |       | 4     |       |       | 2     |       |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 6.0   | 10.0  | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)       | 31.5  | 31.5  | 22.5  | 22.5  | 22.5  | 11.0  | 26.0  | 26.0  | 11.0  | 26.0  |
| Total Split (s)         | 35.0  | 35.0  | 23.0  | 23.0  | 23.0  | 18.0  | 44.0  | 44.0  | 18.0  | 44.0  |
| Total Split (%)         | 29.2% | 29.2% | 19.2% | 19.2% | 19.2% | 15.0% | 36.7% | 36.7% | 15.0% | 36.7% |
| Maximum Green (s)       | 28.5  | 28.5  | 16.5  | 16.5  | 16.5  | 13.0  | 38.0  | 38.0  | 13.0  | 38.0  |
| Yellow Time (s)         | 3.5   | 3.5   | 4.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 2.5   | 2.5   | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead  | Lead  | Lag   | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 3.0   | 0.2   | 0.2   | 3.0   | 0.2   |
| Minimum Gap (s)         | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 3.0   | 0.2   | 0.2   | 3.0   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 4.0   | 4.0   | 4.0   |       | 7.0   | 7.0   |       | 7.0   |
| Flash Dont Walk (s)     | 18.0  | 18.0  | 12.0  | 12.0  | 12.0  |       | 13.0  | 13.0  |       | 13.0  |
| Pedestrian Calls (#/hr) | 5     | 5     | 5     | 5     | 5     |       | 5     | 5     |       | 5     |
| 90th %ile Green (s)     | 25.0  | 25.0  | 16.5  | 16.5  | 16.5  | 11.4  | 41.5  | 41.5  | 13.0  | 43.1  |
| 90th %ile Term Code     | Ped   | Ped   | Max   | Max   | Max   | Gap   | Coord | Coord | Max   | Coord |
| 70th %ile Green (s)     | 7.0   | 7.0   | 12.2  | 12.2  | 12.2  | 9.6   | 63.8  | 63.8  | 13.0  | 67.2  |
| 70th %ile Term Code     | Min   | Min   | Gap   | Gap   | Gap   | Gap   | Coord | Coord | Max   | Coord |
| 50th %ile Green (s)     | 7.0   | 7.0   | 8.5   | 8.5   | 8.5   | 8.4   | 68.5  | 68.5  | 12.0  | 72.1  |
| 50th %ile Term Code     | Min   | Min   | Gap   | Gap   | Gap   | Gap   | Coord | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 0.0   | 0.0   | 7.1   | 7.1   | 7.1   | 7.1   | 85.2  | 85.2  | 10.2  | 88.3  |
| 30th %ile Term Code     | Skip  | Skip  | Gap   | Gap   | Gap   | Gap   | Coord | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   | 7.0   | 7.0   | 7.0   | 0.0   | 88.1  | 88.1  | 7.4   | 100.5 |
| 10th %ile Term Code     | Skip  | Skip  | Min   | Min   | Min   | Skip  | Coord | Coord | Gap   | Coord |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 47 (39%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
10: Beauregard St & Fillmore Ave

Existing 2010  
AM PEAK

| Lane Group          | EBL  | EBT   | EBR   | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT  | SBR   |
|---------------------|------|-------|-------|-------|-------|------|-------|-------|------|-------|------|-------|
| Lane Configurations |      |       |       |       |       |      |       |       |      |       |      |       |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12    | 12    | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12   | 12    |
| Grade (%)           |      | -3%   |       |       | -3%   |      |       | -4%   |      |       | 3%   |       |
| Storage Length (ft) | 0    |       | 150   | 0     |       | 0    | 200   |       | 0    | 75    |      | 0     |
| Storage Lanes       | 0    |       | 1     | 1     |       | 0    | 1     |       | 0    | 1     |      | 0     |
| Taper Length (ft)   | 50   |       |       | 50    |       |      | 50    |       |      | 50    |      |       |
| 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     |      |       | 0.98  |       | 0.98  |      |       | 1.00  |      |       |      | 0.99  |
| Frt                 |      |       | 0.850 |       | 0.878 |      |       | 0.988 |      |       |      | 0.979 |
| Flt Protected       |      | 0.959 |       | 0.950 |       |      | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (prot)   | 0    | 1813  | 1607  | 1796  | 1635  | 0    | 1805  | 3560  | 0    | 1743  | 3394 | 0     |
| Flt Permitted       |      | 0.763 |       | 0.733 |       |      | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (perm)   | 0    | 1443  | 1571  | 1386  | 1635  | 0    | 1805  | 3560  | 0    | 1743  | 3394 | 0     |
| Right Turn on Red   |      |       | Yes   |       |       | Yes  |       |       | Yes  |       |      | Yes   |
| Satd. Flow (RTOR)   |      |       | 102   |       | 22    |      |       | 11    |      |       |      | 21    |
| Link Speed (mph)    |      | 25    |       |       | 25    |      |       | 35    |      |       |      | 35    |
| Link Distance (ft)  |      | 778   |       |       | 309   |      |       | 1416  |      |       |      | 1146  |
| Travel Time (s)     |      | 21.2  |       |       | 8.4   |      |       | 27.6  |      |       |      | 22.3  |

Intersection Summary

Area Type: Other

Timings  
10: Beauregard St & Fillmore Ave

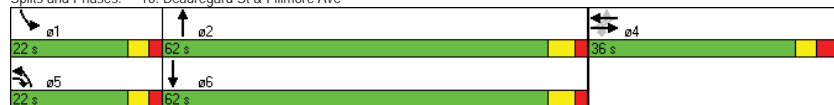
Existing 2010  
AM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       | ↕     | ↕     | ↕     | ↕     | ↕     | ↕     | ↕     | ↕     |
| Volume (vph)         | 30    | 5     | 95    | 45    | 5     | 90    | 685   | 10    | 215   |
| Turn Type            | Perm  | NA    | pm+ov | Perm  | NA    | Prot  | NA    | Prot  | NA    |
| Protected Phases     |       | 4     | 5     |       | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       |       | 4     |       |       |       |       |       |
| Detector Phase       | 4     | 4     | 5     | 4     | 4     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 14.0  | 14.0  | 6.0   | 14.0  | 14.0  | 6.0   | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)    | 33.0  | 33.0  | 11.0  | 33.0  | 33.0  | 11.0  | 16.0  | 11.0  | 16.0  |
| Total Split (s)      | 36.0  | 36.0  | 22.0  | 36.0  | 36.0  | 22.0  | 62.0  | 22.0  | 62.0  |
| Total Split (%)      | 30.0% | 30.0% | 18.3% | 30.0% | 30.0% | 18.3% | 51.7% | 18.3% | 51.7% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.0  | -2.0  | -1.0  | -2.0  | -2.0  | -1.0  | -2.0  | -1.0  | -2.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             |       |       | Lead  |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |       |
| Act Effct Green (s)  | 18.6  | 27.3  | 18.6  | 18.6  | 11.9  | 95.8  | 7.2   | 81.5  |       |
| Actuated g/C Ratio   | 0.16  | 0.23  | 0.16  | 0.16  | 0.10  | 0.80  | 0.06  | 0.68  |       |
| v/c Ratio            | 0.17  | 0.23  | 0.22  | 0.10  | 0.54  | 0.28  | 0.10  | 0.12  |       |
| Control Delay        | 43.9  | 6.1   | 45.3  | 18.7  | 75.4  | 1.9   | 67.0  | 3.8   |       |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Total Delay          | 43.9  | 6.1   | 45.3  | 18.7  | 75.4  | 1.9   | 67.0  | 3.8   |       |
| LOS                  | D     | A     | D     | B     | E     | A     | E     | A     |       |
| Approach Delay       | 16.1  |       |       | 35.7  |       | 9.9   |       | 6.3   |       |
| Approach LOS         | B     |       |       | D     |       | A     |       | A     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 26 (22%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.54  
 Intersection Signal Delay: 11.2      Intersection LOS: B  
 Intersection Capacity Utilization 50.1%      ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 10: Beauregard St & Fillmore Ave



Phasings  
10: Beauregard St & Fillmore Ave

Existing 2010  
AM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 4     | 5     |       | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases        | 4     |       |       | 4     |       |       |       |       |       |
| Minimum Initial (s)     | 14.0  | 14.0  | 6.0   | 14.0  | 14.0  | 6.0   | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)       | 33.0  | 33.0  | 11.0  | 33.0  | 33.0  | 11.0  | 16.0  | 11.0  | 16.0  |
| Total Split (s)         | 36.0  | 36.0  | 22.0  | 36.0  | 36.0  | 22.0  | 62.0  | 22.0  | 62.0  |
| Total Split (%)         | 30.0% | 30.0% | 18.3% | 30.0% | 30.0% | 18.3% | 51.7% | 18.3% | 51.7% |
| Maximum Green (s)       | 30.0  | 30.0  | 17.0  | 30.0  | 30.0  | 17.0  | 56.0  | 17.0  | 56.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       | Lead  |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.2   | 2.0   | 0.2   |
| Minimum Gap (s)         | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.2   | 2.0   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Walk Time (s)           | 4.0   | 4.0   |       | 4.0   | 4.0   |       |       |       |       |
| Flash Dont Walk (s)     | 23.0  | 23.0  |       | 23.0  | 23.0  |       |       |       |       |
| Pedestrian Calls (#/hr) | 5     | 5     |       | 5     | 5     |       |       |       |       |
| 90th %ile Green (s)     | 27.0  | 27.0  | 15.4  | 27.0  | 27.0  | 15.4  | 69.1  | 6.9   | 60.6  |
| 90th %ile Term Code     | Ped   | Ped   | Gap   | Ped   | Ped   | Gap   | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 14.0  | 14.0  | 12.7  | 14.0  | 14.0  | 12.7  | 94.0  | 0.0   | 76.3  |
| 70th %ile Term Code     | Min   | Min   | Gap   | Min   | Min   | Gap   | Coord | Skip  | Coord |
| 50th %ile Green (s)     | 14.0  | 14.0  | 10.9  | 14.0  | 14.0  | 10.9  | 94.0  | 0.0   | 78.1  |
| 50th %ile Term Code     | Min   | Min   | Gap   | Min   | Min   | Gap   | Coord | Skip  | Coord |
| 30th %ile Green (s)     | 14.0  | 14.0  | 9.1   | 14.0  | 14.0  | 9.1   | 94.0  | 0.0   | 79.9  |
| 30th %ile Term Code     | Min   | Min   | Gap   | Min   | Min   | Gap   | Coord | Skip  | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   | 6.4   | 0.0   | 0.0   | 6.4   | 114.0 | 0.0   | 102.6 |
| 10th %ile Term Code     | Skip  | Skip  | Gap   | Skip  | Skip  | Gap   | Coord | Skip  | Coord |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 26 (22%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated



Lanes and Geometrics

11: Mark Center Dr/Mark Center Dr/ Southern Towers & Seminary Rd

Existing 2010

AM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL  | NBT   | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|------|-------|-------|-------|------|------|-------|-------|-------|-------|------|
| Lane Configurations | ↔     | ↔↔↔  | ↔     | ↔     | ↔↔↔   | ↔    | ↔    | ↔     | ↔     | ↔     | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12   | 12    | 12    | 12    | 12    | 12   |
| Grade (%)           | 0%    |      |       |       | -1%   |      | 0%   |       |       |       | 0%    |      |
| Storage Length (ft) | 225   |      | 0     | 210   |       | 0    | 0    |       | 200   | 0     |       | 0    |
| Storage Lanes       | 1     |      | 1     | 1     |       | 0    | 0    |       | 1     | 1     |       | 1    |
| Taper Length (ft)   | 50    |      |       | 50    |       |      | 50   |       |       | 50    |       |      |
| Lane Util. Factor   | 1.00  | 0.91 | 1.00  | 1.00  | 0.91  | 0.91 | 1.00 | 1.00  | 0.88  | 0.95  | 0.95  | 1.00 |
| Ped Bike Factor     |       |      | 0.850 |       | 0.992 |      |      |       | 0.850 |       | 0.850 |      |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      |      | 0.976 |       | 0.950 | 0.969 |      |
| Satd. Flow (prot)   | 1770  | 5085 | 1583  | 1778  | 5070  | 0    | 0    | 1818  | 2787  | 1681  | 1715  | 1583 |
| Flt Permitted       | 0.950 |      |       | 0.950 |       |      |      | 0.976 |       | 0.950 | 0.969 |      |
| Satd. Flow (perm)   | 1770  | 5085 | 1583  | 1778  | 5070  | 0    | 0    | 1818  | 2751  | 1681  | 1715  | 1561 |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |      |       | Yes   |       |       | Yes  |
| Satd. Flow (RTOR)   |       |      | 44    |       | 9     |      |      |       | 109   |       |       | 54   |
| Link Speed (mph)    |       | 35   |       |       | 35    |      |      | 25    |       |       | 25    |      |
| Link Distance (ft)  |       | 737  |       |       | 489   |      |      | 831   |       |       | 642   |      |
| Travel Time (s)     |       | 14.4 |       |       | 9.5   |      |      | 22.7  |       |       | 17.5  |      |

Intersection Summary

Area Type: Other

Timings

11: Mark Center Dr/Mark Center Dr/ Southern Towers & Seminary Rd

Existing 2010

AM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔↔   | ↔     | ↔     | ↔↔↔   | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 20    | 1330  | 65    | 415   | 1630  | 10    | 130   | 230   | 50    | 50    |
| Turn Type            | Prot  | NA    | Free  | Prot  | NA    | NA    | pm+ov | Split | NA    | Perm  |
| Protected Phases     | 1     | 6     |       | 5     | 2     | 4     | 5     | 3     | 3     |       |
| Permitted Phases     |       |       | Free  |       |       | 4     | 4     |       |       | 3     |
| Detector Phase       | 1     | 6     |       | 5     | 2     | 4     | 5     | 3     | 3     | 3     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 10.0  |       | 4.0   | 10.0  | 7.0   | 4.0   | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)    | 9.5   | 16.5  |       | 9.5   | 25.5  | 13.0  | 9.5   | 24.5  | 24.5  | 24.5  |
| Total Split (s)      | 17.0  | 42.0  | 0.0   | 34.0  | 59.0  | 19.0  | 34.0  | 25.0  | 25.0  | 25.0  |
| Total Split (%)      | 14.2% | 35.0% | 0.0%  | 28.3% | 49.2% | 15.8% | 28.3% | 20.8% | 20.8% | 20.8% |
| Yellow Time (s)      | 3.0   | 4.0   |       | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.5   | 2.5   |       | 2.5   | 2.5   | 3.0   | 2.5   | 2.5   | 2.5   | 2.5   |
| Lost Time Adjust (s) | -1.5  | -2.5  | 0.0   | -1.5  | -2.5  | -2.0  | -1.5  | -1.5  | -1.5  | -1.5  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   | Lag   | Lead  | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Max |       | None  | C-Max | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 7.7   | 53.5  | 120.0 | 30.0  | 80.0  | 9.2   | 35.6  | 16.5  | 16.5  | 16.5  |
| Actuated g/C Ratio   | 0.06  | 0.45  | 1.00  | 0.25  | 0.67  | 0.08  | 0.30  | 0.14  | 0.14  | 0.14  |
| v/c Ratio            | 0.19  | 0.63  | 0.04  | 1.00  | 0.55  | 0.16  | 0.16  | 0.64  | 0.65  | 0.21  |
| Control Delay        | 52.2  | 16.8  | 0.0   | 88.6  | 14.1  | 54.4  | 7.9   | 61.3  | 61.7  | 13.3  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 52.2  | 16.8  | 0.0   | 88.6  | 14.1  | 54.4  | 7.9   | 61.3  | 61.7  | 13.3  |
| LOS                  | D     | B     | A     | F     | B     | D     | A     | E     | E     | B     |
| Approach Delay       |       | 16.6  |       |       | 28.6  | 14.2  |       |       | 54.2  |       |
| Approach LOS         |       | B     |       |       | C     | B     |       |       | D     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 74 (62%), Referenced to phase 2:WBT and 6:EBT, Start of Green  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.00  
 Intersection Signal Delay: 25.9  
 Intersection LOS: C  
 Intersection Capacity Utilization 73.1%  
 ICU Level of Service D  
 Analysis Period (min) 15


Splits and Phases: 11: Mark Center Dr/Mark Center Dr/ Southern Towers & Seminary Rd



Phasings

11: Mark Center Dr/Mark Center Dr/ Southern Towers & Seminary Rd

Existing 2010  
AM PEAK



| Lane Group              | EBL   | EBT   | EBR  | WBL   | WBT   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 1     | 6     |      | 5     | 2     | 4     | 5     | 3     | 3     |       |
| Permitted Phases        |       |       | Free |       |       | 4     | 4     |       |       | 3     |
| Minimum Initial (s)     | 4.0   | 10.0  |      | 4.0   | 10.0  | 7.0   | 4.0   | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 9.5   | 16.5  |      | 9.5   | 25.5  | 13.0  | 9.5   | 24.5  | 24.5  | 24.5  |
| Total Split (s)         | 17.0  | 42.0  | 0.0  | 34.0  | 59.0  | 19.0  | 34.0  | 25.0  | 25.0  | 25.0  |
| Total Split (%)         | 14.2% | 35.0% | 0.0% | 28.3% | 49.2% | 15.8% | 28.3% | 20.8% | 20.8% | 20.8% |
| Maximum Green (s)       | 11.5  | 35.5  |      | 28.5  | 52.5  | 13.0  | 28.5  | 19.5  | 19.5  | 19.5  |
| Yellow Time (s)         | 3.0   | 4.0   |      | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.5   | 2.5   |      | 2.5   | 2.5   | 3.0   | 2.5   | 2.5   | 2.5   | 2.5   |
| Lead/Lag                | Lead  | Lag   |      | Lead  | Lag   | Lag   | Lead  | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?      |       |       |      |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 0.2   |      | 2.0   | 0.2   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Minimum Gap (s)         | 2.0   | 0.2   |      | 2.0   | 0.2   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 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)     |       |       |      |       | 12.0  |       |       | 12.0  | 12.0  | 12.0  |
| Pedestrian Calls (#/hr) |       |       |      |       | 5     |       |       | 5     | 5     | 5     |
| 90th %ile Green (s)     | 8.2   | 40.4  |      | 28.5  | 60.7  | 8.1   | 28.5  | 19.5  | 19.5  | 19.5  |
| 90th %ile Term Code     | Gap   | Coord |      | Max   | Coord | Gap   | Max   | Max   | Max   | Max   |
| 70th %ile Green (s)     | 6.9   | 43.4  |      | 28.5  | 65.0  | 7.0   | 28.5  | 17.6  | 17.6  | 17.6  |
| 70th %ile Term Code     | Gap   | Coord |      | Max   | Coord | Min   | Max   | Gap   | Gap   | Gap   |
| 50th %ile Green (s)     | 6.0   | 45.9  |      | 28.5  | 68.4  | 7.0   | 28.5  | 15.1  | 15.1  | 15.1  |
| 50th %ile Term Code     | Gap   | Coord |      | Max   | Coord | Min   | Max   | Gap   | Gap   | Gap   |
| 30th %ile Green (s)     | 0.0   | 61.4  |      | 28.5  | 95.4  | 0.0   | 28.5  | 12.6  | 12.6  | 12.6  |
| 30th %ile Term Code     | Skip  | Coord |      | Max   | Coord | Skip  | Max   | Gap   | Gap   | Gap   |
| 10th %ile Green (s)     | 0.0   | 64.0  |      | 28.5  | 98.0  | 0.0   | 28.5  | 10.0  | 10.0  | 10.0  |
| 10th %ile Term Code     | Skip  | Coord |      | Max   | Coord | Skip  | Max   | Min   | Min   | Min   |


Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 74 (62%), Referenced to phase 2:WBT and 6:EBT, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

12: Beauregard St & Seminary Rd

Existing 2010  
AM PEAK



| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT  | WBR   | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|-------|------|-------|------|-------|-------|------|-------|-------|-------|------|
| Lane Configurations |       | ↑↑↑   |      | ↑↑    | ↑↑   | ↑↑    | ↑↑    | ↑↑   | ↑↑    | ↑↑    | ↑↑    | ↑↑   |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           |       | -1%   |      |       | -1%  |       |       | 0%   |       |       | 2%    |      |
| Storage Length (ft) | 150   |       | 300  | 250   |      | 80    | 200   |      | 245   | 170   |       | 0    |
| Storage Lanes       | 1     |       | 1    | 1     |      | 1     | 1     |      | 1     | 1     |       | 0    |
| Taper Length (ft)   | 50    |       |      | 50    |      |       | 50    |      |       | 50    |       |      |
| Lane Util. Factor   | 1.00  | 0.91  | 0.91 | 0.97  | 0.95 | 1.00  | 0.97  | 0.95 | 1.00  | 1.00  | 0.95  | 0.95 |
| Ped Bike Factor     |       | 1.00  |      |       |      | 0.98  |       |      | 0.99  |       | 1.00  |      |
| Frt                 |       | 0.968 |      |       |      | 0.850 |       |      | 0.850 |       | 0.969 |      |
| Flt Protected       | 0.950 |       |      | 0.950 |      |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (prot)   | 1778  | 4934  | 0    | 3450  | 3557 | 1591  | 3433  | 3539 | 1583  | 1752  | 3383  | 0    |
| Flt Permitted       | 0.950 |       |      | 0.950 |      |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (perm)   | 1778  | 4934  | 0    | 3450  | 3557 | 1558  | 3433  | 3539 | 1561  | 1752  | 3383  | 0    |
| Right Turn on Red   |       |       | Yes  |       |      | Yes   |       |      | Yes   |       |       | Yes  |
| Satd. Flow (RTOR)   |       | 58    |      |       |      | 45    |       |      | 391   |       | 25    |      |
| Link Speed (mph)    |       | 35    |      |       | 35   |       |       | 35   |       |       | 35    |      |
| Link Distance (ft)  |       | 1256  |      |       | 737  |       |       | 824  |       |       | 1416  |      |
| Travel Time (s)     |       | 24.5  |      |       | 14.4 |       |       | 16.1 |       |       | 27.6  |      |

Intersection Summary

Area Type: Other

**Timings**  
12: Beauregard St & Seminary Rd

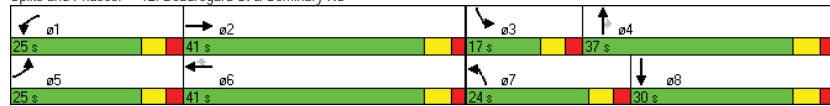
Existing 2010  
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔↔    | ↔↔    | ↔     | ↔↔    | ↔↔    | ↔     | ↔     | ↔↔    |
| Volume (vph)         | 60    | 860   | 335   | 1195  | 160   | 440   | 615   | 470   | 85    | 215   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     |       | 7     | 4     |       | 3     | 8     |
| Permitted Phases     |       |       |       |       | 6     |       |       | 4     |       |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 6     | 7     | 4     | 4     | 3     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 6.0   | 10.0  | 6.0   | 10.0  | 10.0  | 6.0   | 7.0   | 7.0   | 6.0   | 7.0   |
| Minimum Split (s)    | 12.0  | 16.0  | 12.0  | 16.0  | 16.0  | 12.0  | 13.5  | 13.5  | 12.0  | 13.5  |
| Total Split (s)      | 25.0  | 41.0  | 25.0  | 41.0  | 41.0  | 24.0  | 37.0  | 37.0  | 17.0  | 30.0  |
| Total Split (%)      | 20.8% | 34.2% | 20.8% | 34.2% | 34.2% | 20.0% | 30.8% | 30.8% | 14.2% | 25.0% |
| Yellow Time (s)      | 3.5   | 4.0   | 3.5   | 4.0   | 4.0   | 3.5   | 4.0   | 4.0   | 3.5   | 4.0   |
| All-Red Time (s)     | 2.5   | 2.0   | 2.5   | 2.0   | 2.0   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   |
| Lost Time Adjust (s) | -2.0  | -2.0  | -2.0  | -2.0  | 0.0   | -2.0  | -2.5  | 0.0   | -2.0  | -5.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 6.0   | 4.0   | 6.5   | 4.0   | 1.5   |       |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Max | None  | C-Max | C-Max | None  | Max   | Max   | None  | Max   |
| Act Effct Green (s)  | 10.3  | 40.2  | 18.4  | 50.7  | 48.7  | 19.4  | 33.9  | 31.4  | 11.6  | 28.5  |
| Actuated g/C Ratio   | 0.09  | 0.34  | 0.15  | 0.42  | 0.41  | 0.16  | 0.28  | 0.26  | 0.10  | 0.24  |
| v/c Ratio            | 0.42  | 0.69  | 0.68  | 0.86  | 0.26  | 0.85  | 0.66  | 0.72  | 0.54  | 0.35  |
| Control Delay        | 44.9  | 44.8  | 73.2  | 28.3  | 13.8  | 49.8  | 37.8  | 24.5  | 68.5  | 38.7  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 44.9  | 44.8  | 73.2  | 28.3  | 13.8  | 49.8  | 37.8  | 24.5  | 68.5  | 38.7  |
| LOS                  | D     | D     | E     | C     | B     | D     | D     | C     | E     | D     |
| Approach Delay       |       | 44.8  |       | 35.8  |       |       | 37.2  |       |       | 45.8  |
| Approach LOS         |       | D     |       | D     |       |       | D     |       |       | D     |

**Intersection Summary**

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 61 (51%), Referenced to phase 2:EBT and 6:WBT, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 39.2  
 Intersection LOS: D  
 Intersection Capacity Utilization 73.4%  
 ICU Level of Service D  
 Analysis Period (min) 15

**Splits and Phases: 12: Beauregard St & Seminary Rd**



**Phasings**  
12: Beauregard St & Seminary Rd

Existing 2010  
AM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 5     | 2     | 1     | 6     |       | 7     | 4     |       | 3     | 8     |
| Permitted Phases        |       |       |       |       | 6     |       |       | 4     |       |       |
| Minimum Initial (s)     | 6.0   | 10.0  | 6.0   | 10.0  | 10.0  | 6.0   | 7.0   | 7.0   | 6.0   | 7.0   |
| Minimum Split (s)       | 12.0  | 16.0  | 12.0  | 16.0  | 16.0  | 12.0  | 13.5  | 13.5  | 12.0  | 13.5  |
| Total Split (s)         | 25.0  | 41.0  | 25.0  | 41.0  | 41.0  | 24.0  | 37.0  | 37.0  | 17.0  | 30.0  |
| Total Split (%)         | 20.8% | 34.2% | 20.8% | 34.2% | 34.2% | 20.0% | 30.8% | 30.8% | 14.2% | 25.0% |
| Maximum Green (s)       | 19.0  | 35.0  | 19.0  | 35.0  | 35.0  | 18.0  | 30.5  | 30.5  | 11.0  | 23.5  |
| Yellow Time (s)         | 3.5   | 4.0   | 3.5   | 4.0   | 4.0   | 3.5   | 4.0   | 4.0   | 3.5   | 4.0   |
| All-Red Time (s)        | 2.5   | 2.0   | 2.5   | 2.0   | 2.0   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 1.0   | 0.2   | 2.0   | 0.2   | 0.2   | 1.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Minimum Gap (s)         | 1.0   | 0.2   | 2.0   | 0.2   | 0.2   | 1.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | C-Max | None  | C-Max | C-Max | None  | Max   | Max   | None  | Max   |
| Walk Time (s)           |       |       |       |       |       |       |       |       |       |       |
| Flash Dont Walk (s)     |       |       |       |       |       |       |       |       |       |       |
| Pedestrian Calls (#/hr) |       |       |       |       |       |       |       |       |       |       |
| 90th %ile Green (s)     | 11.7  | 35.0  | 19.0  | 42.3  | 42.3  | 18.0  | 30.5  | 30.5  | 11.0  | 23.5  |
| 90th %ile Term Code     | Gap   | Coord | Max   | Coord | Coord | Max   | MaxR  | MaxR  | Max   | MaxR  |
| 70th %ile Green (s)     | 9.5   | 35.3  | 18.7  | 44.5  | 44.5  | 18.0  | 30.5  | 30.5  | 11.0  | 23.5  |
| 70th %ile Term Code     | Gap   | Coord | Gap   | Coord | Coord | Max   | MaxR  | MaxR  | Max   | MaxR  |
| 50th %ile Green (s)     | 7.9   | 37.1  | 16.9  | 46.1  | 46.1  | 18.0  | 30.8  | 30.8  | 10.7  | 23.5  |
| 50th %ile Term Code     | Gap   | Coord | Gap   | Coord | Coord | Max   | Hold  | Hold  | Gap   | MaxR  |
| 30th %ile Green (s)     | 6.4   | 39.0  | 15.0  | 47.6  | 47.6  | 18.0  | 32.6  | 32.6  | 8.9   | 23.5  |
| 30th %ile Term Code     | Gap   | Coord | Gap   | Coord | Coord | Max   | Hold  | Hold  | Gap   | MaxR  |
| 10th %ile Green (s)     | 0.0   | 44.6  | 12.3  | 62.9  | 62.9  | 15.1  | 32.4  | 32.4  | 6.2   | 23.5  |
| 10th %ile Term Code     | Skip  | Coord | Gap   | Coord | Coord | Gap   | Hold  | Hold  | Gap   | MaxR  |

**Intersection Summary**

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 61 (51%), Referenced to phase 2:EBT and 6:WBT, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
13: Echols Ave & Seminary Rd

Existing 2010  
AM PEAK

| Lane Group          | EBL  | EBT   | EBR  | WBL  | WBT   | WBR  | NBL  | NBT   | NBR  | SBL  | SBT   | SBR  |
|---------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Lane Configurations |      | ↔     |      |      | ↔     |      |      | ↕     |      |      | ↕     |      |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12   |
| Grade (%)           |      | -1%   |      |      | 1%    |      |      | 0%    |      |      | 0%    |      |
| Storage Length (ft) | 0    |       | 0    | 0    |       | 0    | 0    |       | 0    | 0    |       | 0    |
| Storage Lanes       | 0    |       | 0    | 0    |       | 0    | 0    |       | 0    | 0    |       | 0    |
| Taper Length (ft)   | 50   |       |      | 50   |       |      | 50   |       |      | 50   |       |      |
| Lane Util. Factor   | 0.95 | 0.95  | 0.95 | 0.95 | 0.95  | 0.95 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Ped Bike Factor     |      | 1.00  |      |      |       |      |      |       |      |      | 0.99  |      |
| Frt                 |      | 0.999 |      |      | 0.999 |      |      | 0.885 |      |      | 0.958 |      |
| Flt Protected       |      |       |      |      | 0.999 |      |      | 0.993 |      |      | 0.967 |      |
| Satd. Flow (prot)   | 0    | 3553  | 0    | 0    | 3514  | 0    | 0    | 1637  | 0    | 0    | 1716  | 0    |
| Flt Permitted       |      | 0.944 |      |      | 0.908 |      |      | 0.993 |      |      | 0.967 |      |
| Satd. Flow (perm)   | 0    | 3354  | 0    | 0    | 3194  | 0    | 0    | 1637  | 0    | 0    | 1716  | 0    |
| Right Turn on Red   |      |       | Yes  |      |       | Yes  |      |       | Yes  |      |       | Yes  |
| Satd. Flow (RTOR)   |      |       |      |      | 1     |      |      | 91    |      |      | 5     |      |
| Link Speed (mph)    |      | 35    |      |      | 35    |      |      | 25    |      |      | 25    |      |
| Link Distance (ft)  |      | 1011  |      |      | 1256  |      |      | 653   |      |      | 530   |      |
| Travel Time (s)     |      | 19.7  |      |      | 24.5  |      |      | 17.8  |      |      | 14.5  |      |

Intersection Summary

Area Type: Other

Timings  
13: Echols Ave & Seminary Rd

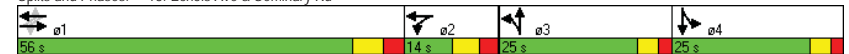
Existing 2010  
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBT   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       | ↔     |       | ↔     | ↕     | ↕     |
| Volume (vph)         | 5     | 1055  | 30    | 1650  | 0     | 0     |
| Turn Type            | Perm  | NA    | pm+pt | NA    | NA    | NA    |
| Protected Phases     |       | 1     | 2     | 1.2   | 3     | 4     |
| Permitted Phases     | 1     |       | 1.2   |       |       |       |
| Detector Phase       | 1     | 1     | 2     | 1.2   | 3     | 4     |
| Switch Phase         |       |       |       |       |       |       |
| Minimum Initial (s)  | 10.0  | 10.0  | 6.0   |       | 7.0   | 7.0   |
| Minimum Split (s)    | 23.5  | 23.5  | 13.0  |       | 24.0  | 24.0  |
| Total Split (s)      | 56.0  | 56.0  | 14.0  | 70.0  | 25.0  | 25.0  |
| Total Split (%)      | 46.7% | 46.7% | 11.7% | 58.3% | 20.8% | 20.8% |
| Yellow Time (s)      | 4.5   | 4.5   | 4.0   |       | 3.0   | 3.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   |       | 2.0   | 2.0   |
| Lost Time Adjust (s) | -3.5  | -3.5  | -3.0  | -3.5  | -1.0  | -1.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lead  | Lag   |       | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |
| Recall Mode          | C-Max | C-Max | None  |       | None  | None  |
| Act Effct Green (s)  |       | 79.6  |       | 89.6  | 11.2  | 10.4  |
| Actuated g/C Ratio   |       | 0.66  |       | 0.75  | 0.09  | 0.09  |
| v/c Ratio            |       | 0.51  |       | 0.75  | 0.46  | 0.10  |
| Control Delay        |       | 10.8  |       | 7.5   | 19.6  | 38.9  |
| Queue Delay          |       | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Total Delay          |       | 10.8  |       | 7.5   | 19.6  | 38.9  |
| LOS                  |       | B     |       | A     | B     | D     |
| Approach Delay       |       | 10.8  |       | 7.5   | 19.6  | 38.9  |
| Approach LOS         |       | B     |       | A     | B     | D     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 89 (74%), Referenced to phase 1:EBWB, Start of Green  
 Natural Cycle: 135  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.75  
 Intersection Signal Delay: 9.3  
 Intersection Capacity Utilization 80.7%  
 Analysis Period (min) 15  
 Intersection LOS: A  
 ICU Level of Service D

Splits and Phases: 13: Echols Ave & Seminary Rd



Phasings  
13: Echols Ave & Seminary Rd

Existing 2010  
AM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBT   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 1     | 2     | 1 2   | 3     | 4     |
| Permitted Phases        | 1     |       | 1 2   |       |       |       |
| Minimum Initial (s)     | 10.0  | 10.0  | 6.0   |       | 7.0   | 7.0   |
| Minimum Split (s)       | 23.5  | 23.5  | 13.0  |       | 24.0  | 24.0  |
| Total Split (s)         | 56.0  | 56.0  | 14.0  | 70.0  | 25.0  | 25.0  |
| Total Split (%)         | 46.7% | 46.7% | 11.7% | 58.3% | 20.8% | 20.8% |
| Maximum Green (s)       | 48.5  | 48.5  | 7.0   |       | 20.0  | 20.0  |
| Yellow Time (s)         | 4.5   | 4.5   | 4.0   |       | 3.0   | 3.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   |       | 2.0   | 2.0   |
| Lead/Lag                | Lead  | Lead  | Lag   |       | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |
| Vehicle Extension (s)   | 0.2   | 0.2   | 2.0   |       | 4.0   | 2.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 2.0   |       | 4.0   | 2.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |
| Recall Mode             | C-Max | C-Max | None  |       | None  | None  |
| Walk Time (s)           | 4.0   | 4.0   |       |       | 4.0   | 4.0   |
| Flash Dont Walk (s)     | 12.0  | 12.0  |       |       | 15.0  | 15.0  |
| Pedestrian Calls (#/hr) | 5     | 5     |       |       | 5     | 5     |
| 90th %ile Green (s)     | 50.5  | 50.5  | 7.0   |       | 19.0  | 19.0  |
| 90th %ile Term Code     | Coord | Coord | Max   |       | Ped   | Ped   |
| 70th %ile Green (s)     | 71.5  | 71.5  | 7.0   |       | 10.0  | 7.0   |
| 70th %ile Term Code     | Coord | Coord | Max   |       | Gap   | Min   |
| 50th %ile Green (s)     | 85.7  | 85.7  | 7.0   |       | 7.8   | 0.0   |
| 50th %ile Term Code     | Coord | Coord | Max   |       | Gap   | Skip  |
| 30th %ile Green (s)     | 86.5  | 86.5  | 7.0   |       | 7.0   | 0.0   |
| 30th %ile Term Code     | Coord | Coord | Max   |       | Min   | Skip  |
| 10th %ile Green (s)     | 86.5  | 86.5  | 7.0   |       | 7.0   | 0.0   |
| 10th %ile Term Code     | Coord | Coord | Max   |       | Min   | Skip  |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 89 (74%), Referenced to phase 1:EBWB, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
14: Dawes Ave & Seminary Rd

Existing 2010  
AM PEAK


| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL  | NBT   | NBR  | SBL  | SBT   | SBR   |
|---------------------|-------|-------|------|-------|-------|------|------|-------|------|------|-------|-------|
| Lane Configurations |       |       |      |       |       |      |      |       |      |      |       |       |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900  |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12    |
| Grade (%)           |       | 0%    |      |       | 0%    |      |      | 0%    |      |      |       | 0%    |
| Storage Length (ft) | 240   |       | 0    | 55    |       | 0    | 0    |       | 0    | 0    |       | 0     |
| Storage Lanes       | 1     |       | 0    | 1     |       | 0    | 0    |       | 0    | 0    |       | 1     |
| Taper Length (ft)   | 50    |       |      | 50    |       |      | 50   |       | 50   |      |       | 50    |
| 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  |
| Ped Bike Factor     |       | 1.00  |      |       | 1.00  |      |      | 0.99  |      |      |       | 0.97  |
| Frt                 |       | 0.999 |      |       | 0.995 |      |      | 0.927 |      |      |       | 0.850 |
| Flt Protected       | 0.950 |       |      | 0.950 |       |      |      | 0.991 |      |      |       | 0.976 |
| Satd. Flow (prot)   | 1770  | 3535  | 0    | 1770  | 3519  | 0    | 0    | 1692  | 0    | 0    | 1818  | 1583  |
| Flt Permitted       | 0.097 |       |      | 0.232 |       |      |      | 0.940 |      |      | 0.880 |       |
| Satd. Flow (perm)   | 181   | 3535  | 0    | 432   | 3519  | 0    | 0    | 1605  | 0    | 0    | 1639  | 1532  |
| Right Turn on Red   |       |       | Yes  |       |       | Yes  |      |       | Yes  |      |       | Yes   |
| Satd. Flow (RTOR)   |       | 1     |      |       | 4     |      |      | 32    |      |      |       | 22    |
| Link Speed (mph)    |       | 35    |      |       | 35    |      |      | 25    |      |      |       | 25    |
| Link Distance (ft)  |       | 248   |      |       | 1011  |      |      | 734   |      |      |       | 1285  |
| Travel Time (s)     |       | 4.8   |      |       | 19.7  |      |      | 20.0  |      |      |       | 35.0  |

Intersection Summary

Area Type: Other

Timings  
14: Dawes Ave & Seminary Rd

Existing 2010  
AM PEAK



| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↕     | ↗     | ↕     | ↖     | ↕     | ↗     | ↕     | ↖     |
| Volume (vph)         | 35    | 1025  | 35    | 1585  | 10    | 15    | 10    | 10    | 20    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | NA    | Perm  |
| Protected Phases     | 5     | 2     | 1     | 6     | 4     | 4     | 4     | 4     | 4     |
| Permitted Phases     | 2     |       | 6     |       | 4     |       | 4     |       | 4     |
| Detector Phase       | 5     | 2     | 1     | 6     | 4     | 4     | 4     | 4     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 10.0  | 4.0   | 10.0  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)    | 9.0   | 30.0  | 9.0   | 16.0  | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  |
| Total Split (s)      | 18.0  | 68.0  | 18.0  | 68.0  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  |
| Total Split (%)      | 15.0% | 56.7% | 15.0% | 56.7% | 28.3% | 28.3% | 28.3% | 28.3% | 28.3% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | -1.0  | -2.0  | -1.0  | -2.0  | -2.0  | -2.0  | -2.0  | -2.0  | -2.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 99.8  | 96.8  | 99.8  | 96.8  | 12.6  |       | 12.6  |       | 12.6  |
| Actuated g/C Ratio   | 0.83  | 0.81  | 0.83  | 0.81  | 0.10  |       | 0.10  |       | 0.10  |
| v/c Ratio            | 0.16  | 0.39  | 0.09  | 0.62  | 0.30  |       | 0.13  |       | 0.12  |
| Control Delay        | 4.2   | 5.6   | 2.7   | 4.7   | 29.4  |       | 47.8  |       | 17.8  |
| Queue Delay          | 0.0   | 0.2   | 0.0   | 0.0   | 0.0   |       | 0.0   |       | 0.0   |
| Total Delay          | 4.2   | 5.8   | 2.7   | 4.7   | 29.4  |       | 47.8  |       | 17.8  |
| LOS                  | A     | A     | A     | A     | C     |       | D     |       | B     |
| Approach Delay       |       | 5.8   |       | 4.7   | 29.4  |       | 32.8  |       |       |
| Approach LOS         |       | A     |       | A     | C     |       | C     |       |       |

Intersection Summary


Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 95 (79%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.62  
 Intersection Signal Delay: 6.0  
 Intersection LOS: A  
 Intersection Capacity Utilization 74.0%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 14: Dawes Ave & Seminary Rd



Phasings  
14: Dawes Ave & Seminary Rd

Existing 2010  
AM PEAK



| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 5     | 2     | 1     | 6     | 4     | 4     | 4     | 4     | 4     |
| Permitted Phases        | 2     |       | 6     |       | 4     |       | 4     |       | 4     |
| Minimum Initial (s)     | 4.0   | 10.0  | 4.0   | 10.0  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)       | 9.0   | 30.0  | 9.0   | 16.0  | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  |
| Total Split (s)         | 18.0  | 68.0  | 18.0  | 68.0  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  |
| Total Split (%)         | 15.0% | 56.7% | 15.0% | 56.7% | 28.3% | 28.3% | 28.3% | 28.3% | 28.3% |
| Maximum Green (s)       | 13.0  | 62.0  | 13.0  | 62.0  | 28.0  | 28.0  | 28.0  | 28.0  | 28.0  |
| Yellow Time (s)         | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   |       |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 0.2   | 2.0   | 0.2   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Minimum Gap (s)         | 2.0   | 0.2   | 2.0   | 0.2   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  |
| Walk Time (s)           | 4.0   |       | 4.0   |       | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Flash Dont Walk (s)     |       | 20.0  |       |       | 17.0  | 17.0  | 17.0  | 17.0  | 17.0  |
| Pedestrian Calls (#/hr) |       | 5     |       |       | 5     | 5     | 5     | 5     | 5     |
| 90th %ile Green (s)     | 6.0   | 76.0  | 6.0   | 76.0  | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  |
| 90th %ile Term Code     | Gap   | Coord | Gap   | Coord | Ped   | Ped   | Ped   | Ped   | Ped   |
| 70th %ile Green (s)     | 5.1   | 89.8  | 5.1   | 89.8  | 8.1   | 8.1   | 8.1   | 8.1   | 8.1   |
| 70th %ile Term Code     | Gap   | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Gap   | Gap   |
| 50th %ile Green (s)     | 4.9   | 90.1  | 4.9   | 90.1  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| 50th %ile Term Code     | Gap   | Coord | Gap   | Coord | Min   | Min   | Min   | Min   | Min   |
| 30th %ile Green (s)     | 0.0   | 100.0 | 0.0   | 100.0 | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| 30th %ile Term Code     | Skip  | Coord | Skip  | Coord | Min   | Min   | Min   | Min   | Min   |
| 10th %ile Green (s)     | 0.0   | 114.0 | 0.0   | 114.0 | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 10th %ile Term Code     | Skip  | Coord | Skip  | Coord | Skip  | Skip  | Skip  | Skip  | Skip  |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 95 (79%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
15: Beauregard St & Mark Center Dr

Existing 2010  
AM PEAK

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT  | WBR   | NBL   | NBT   | NBR  | SBL   | SBT  | SBR  |
|---------------------|-------|-------|------|-------|------|-------|-------|-------|------|-------|------|------|
| Lane Configurations | ↔     | ↔     | ↔    | ↔     | ↔    | ↔     | ↔     | ↔     | ↔    | ↔     | ↔    | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12   | 12   |
| Grade (%)           | 0%    |       | 0%   |       | 0%   |       | 0%    |       | 0%   |       | 0%   |      |
| Storage Length (ft) | 0     | 0     | 0    | 0     | 0    | 190   | 0     | 210   | 0    | 0     | 0    | 0    |
| Storage Lanes       | 1     | 0     | 1    | 0     | 1    | 0     | 1     | 0     | 1    | 0     | 1    | 0    |
| Taper Length (ft)   | 50    | 50    | 50   | 50    | 50   | 50    | 50    | 50    | 50   | 50    | 50   | 50   |
| Lane Util. Factor   | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 | 1.00  | 0.91  | 0.91  | 1.00 | 0.95  | 0.95 | 0.95 |
| Ped Bike Factor     | 0.99  |       |      |       |      | 0.99  |       |       | 0.99 |       |      |      |
| Frt                 | 0.925 |       |      | 0.886 |      |       | 0.984 |       |      | 0.961 |      |      |
| Flt Protected       | 0.950 | 0.950 |      | 0.950 |      | 0.950 |       | 0.950 |      | 0.950 |      |      |
| Satd. Flow (prot)   | 1770  | 1723  | 0    | 1770  | 1634 | 0     | 1770  | 5004  | 0    | 1770  | 3372 | 0    |
| Flt Permitted       | 0.744 | 0.751 |      | 0.376 |      | 0.094 |       | 0.094 |      |       |      |      |
| Satd. Flow (perm)   | 1386  | 1723  | 0    | 1399  | 1634 | 0     | 700   | 5004  | 0    | 175   | 3372 | 0    |
| Right Turn on Red   | Yes   |       | Yes  |       | Yes  |       | Yes   |       | Yes  |       |      |      |
| Satd. Flow (RTOR)   | 5     |       | 16   |       | 25   |       | 59    |       | 59   |       |      |      |
| Link Speed (mph)    | 25    |       | 25   |       | 35   |       | 35    |       | 35   |       |      |      |
| Link Distance (ft)  | 355   |       | 910  |       | 780  |       | 824   |       | 824  |       |      |      |
| Travel Time (s)     | 9.7   |       | 24.8 |       | 15.2 |       | 16.1  |       | 16.1 |       |      |      |

Intersection Summary

Area Type: Other

Timings  
15: Beauregard St & Mark Center Dr

Existing 2010  
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 10    | 5     | 15    | 5     | 50    | 1500  | 105   | 500   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 4     |       | 4     |       | 5     |       | 6     |       |
| Permitted Phases     | 4     |       | 4     |       | 5     |       | 6     |       |
| Detector Phase       | 4     |       | 4     |       | 5     |       | 6     |       |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 33.0  | 33.0  | 33.0  | 33.0  | 9.0   | 24.0  | 9.0   | 24.0  |
| Total Split (s)      | 35.0  | 35.0  | 35.0  | 35.0  | 20.0  | 65.0  | 20.0  | 65.0  |
| Total Split (%)      | 29.2% | 29.2% | 29.2% | 29.2% | 16.7% | 54.2% | 16.7% | 54.2% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.0  | -2.0  | -2.0  | -2.0  | -1.0  | -2.0  | -1.0  | -2.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  | 13.0  | 13.0  | 13.0  | 13.0  | 97.3  | 91.0  | 103.4 | 96.6  |
| Actuated g/C Ratio   | 0.11  | 0.11  | 0.11  | 0.11  | 0.81  | 0.76  | 0.86  | 0.80  |
| v/c Ratio            | 0.07  | 0.05  | 0.11  | 0.11  | 0.09  | 0.48  | 0.42  | 0.27  |
| Control Delay        | 44.5  | 31.7  | 45.6  | 22.7  | 1.4   | 2.5   | 14.0  | 4.3   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 44.5  | 31.7  | 45.6  | 22.7  | 1.4   | 2.5   | 14.0  | 4.3   |
| LOS                  | D     | C     | D     | C     | A     | A     | B     | A     |
| Approach Delay       | 38.4  |       | 32.6  |       | 2.5   |       | 5.6   |       |
| Approach LOS         | D     |       | C     |       | A     |       | A     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 66 (55%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.48  
 Intersection Signal Delay: 4.1  
 Intersection Capacity Utilization 56.8%  
 Analysis Period (min) 15  
 Intersection LOS: A  
 ICU Level of Service B

Splits and Phases: 15: Beauregard St & Mark Center Dr



Phasings  
15: Beauregard St & Mark Center Dr

Existing 2010  
AM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 4     |       | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases        | 4     |       | 4     |       | 2     |       | 6     |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)       | 33.0  | 33.0  | 33.0  | 33.0  | 9.0   | 24.0  | 9.0   | 24.0  |
| Total Split (s)         | 35.0  | 35.0  | 35.0  | 35.0  | 20.0  | 65.0  | 20.0  | 65.0  |
| Total Split (%)         | 29.2% | 29.2% | 29.2% | 29.2% | 16.7% | 54.2% | 16.7% | 54.2% |
| Maximum Green (s)       | 29.0  | 29.0  | 29.0  | 29.0  | 15.0  | 59.0  | 15.0  | 59.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.2   | 2.0   | 0.2   |
| Minimum Gap (s)         | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.2   | 2.0   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Walk Time (s)           | 8.0   | 8.0   | 8.0   | 8.0   |       | 6.0   |       | 6.0   |
| Flash Dont Walk (s)     | 19.0  | 19.0  | 19.0  | 19.0  |       | 12.0  |       | 12.0  |
| Pedestrian Calls (#/hr) | 5     | 5     | 5     | 5     |       | 5     |       | 5     |
| 90th %ile Green (s)     | 27.0  | 27.0  | 27.0  | 27.0  | 6.9   | 63.2  | 12.8  | 69.1  |
| 90th %ile Term Code     | Ped   | Ped   | Ped   | Ped   | Gap   | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 5.3   | 86.1  | 9.9   | 90.7  |
| 70th %ile Term Code     | Min   | Min   | Min   | Min   | Gap   | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 5.1   | 88.2  | 7.8   | 90.9  |
| 50th %ile Term Code     | Min   | Min   | Min   | Min   | Gap   | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 0.0   | 0.0   | 0.0   | 0.0   | 4.6   | 103.3 | 5.7   | 104.4 |
| 30th %ile Term Code     | Skip  | Skip  | Skip  | Skip  | Gap   | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 104.4 | 4.6   | 114.0 |
| 10th %ile Term Code     | Skip  | Skip  | Skip  | Skip  | Skip  | Coord | Gap   | Coord |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 66 (55%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
16: Beauregard St & Clyde's Restaurant/Highview Ln

Existing 2010  
AM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT  | WBR  | NBL   | NBT  | NBR  | SBL   | SBT  | SBR  |
|---------------------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|
| Lane Configurations |       |      |      |       |      |      |       |      |      |       |      |      |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12   | 12   |
| Grade (%)           |       | 0%   |      |       |      | 0%   |       | 0%   |      |       |      | -1%  |
| Storage Length (ft) | 0     |      | 150  | 115   |      | 0    | 185   |      | 200  | 185   |      | 0    |
| Storage Lanes       | 1     |      | 1    | 1     |      | 0    | 1     |      | 1    | 1     |      | 0    |
| Taper Length (ft)   | 50    |      |      | 50    |      |      | 50    |      |      | 50    |      |      |
| Lane Util. Factor   | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 0.91 | 0.91 | 1.00  | 0.95 | 0.95 |
| Ped Bike Factor     | 0.99  |      |      | 0.98  |      |      | 1.00  |      |      | 1.00  |      | 1.00 |
| Frt                 | 0.870 |      |      | 0.873 |      |      | 0.993 |      |      | 0.989 |      |      |
| Flt Protected       | 0.950 |      |      | 0.950 |      |      | 0.950 |      |      | 0.950 |      |      |
| Satd. Flow (prot)   | 1770  | 1602 | 0    | 1770  | 1600 | 0    | 1770  | 5042 | 0    | 1778  | 3509 | 0    |
| Flt Permitted       | 0.736 |      |      | 0.733 |      |      | 0.456 |      |      | 0.094 |      |      |
| Satd. Flow (perm)   | 1371  | 1602 | 0    | 1365  | 1600 | 0    | 849   | 5042 | 0    | 176   | 3509 | 0    |
| Right Turn on Red   |       |      | Yes  |       |      | Yes  |       |      | Yes  |       |      | Yes  |
| Satd. Flow (RTOR)   |       | 32   |      |       | 27   |      |       | 9    |      |       | 11   |      |
| Link Speed (mph)    |       | 25   |      |       | 25   |      |       | 35   |      |       | 35   |      |
| Link Distance (ft)  |       | 521  |      |       | 422  |      |       | 719  |      |       | 780  |      |
| Travel Time (s)     |       | 14.2 |      |       | 11.5 |      |       | 14.0 |      |       | 15.2 |      |

Intersection Summary

Area Type: Other



**Timings**  
**16: Beauregard St & Clyde's Restaurant/Highview Ln**

Existing 2010  
 AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 80    | 5     | 5     | 5     | 10    | 1625  | 30    | 455   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 4     | 4     | 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   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 31.0  | 31.0  | 31.0  | 31.0  | 9.0   | 31.0  | 9.0   | 31.0  |
| Total Split (s)      | 33.0  | 33.0  | 33.0  | 33.0  | 15.0  | 72.0  | 15.0  | 72.0  |
| Total Split (%)      | 27.5% | 27.5% | 27.5% | 27.5% | 12.5% | 60.0% | 12.5% | 60.0% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  | 12.9  | 12.9  | 12.9  | 12.9  | 95.5  | 92.2  | 97.9  | 96.8  |
| Actuated g/C Ratio   | 0.11  | 0.11  | 0.11  | 0.11  | 0.80  | 0.77  | 0.82  | 0.81  |
| v/c Ratio            | 0.59  | 0.18  | 0.03  | 0.16  | 0.02  | 0.47  | 0.14  | 0.19  |
| Control Delay        | 66.0  | 19.7  | 45.4  | 20.8  | 2.0   | 4.7   | 3.6   | 0.6   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 66.0  | 19.7  | 45.4  | 20.8  | 2.0   | 4.7   | 3.6   | 0.6   |
| LOS                  | E     | B     | D     | C     | A     | A     | A     | A     |
| Approach Delay       |       | 52.1  |       | 24.2  |       | 4.7   |       | 0.7   |
| Approach LOS         |       | D     |       | C     |       | A     |       | A     |

**Intersection Summary**

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 60 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.59  
 Intersection Signal Delay: 6.4  
 Intersection LOS: A  
 Intersection Capacity Utilization 54.5%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 16: Beauregard St & Clyde's Restaurant/Highview Ln



**Phasings**  
**16: Beauregard St & Clyde's Restaurant/Highview Ln**

Existing 2010  
 AM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 4     |       | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases        | 4     |       | 4     |       | 2     |       | 6     |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)       | 31.0  | 31.0  | 31.0  | 31.0  | 9.0   | 31.0  | 9.0   | 31.0  |
| Total Split (s)         | 33.0  | 33.0  | 33.0  | 33.0  | 15.0  | 72.0  | 15.0  | 72.0  |
| Total Split (%)         | 27.5% | 27.5% | 27.5% | 27.5% | 12.5% | 60.0% | 12.5% | 60.0% |
| Maximum Green (s)       | 27.0  | 27.0  | 27.0  | 27.0  | 10.0  | 66.0  | 10.0  | 66.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   |       | 7.0   |       | 7.0   |
| Flash Dont Walk (s)     | 18.0  | 18.0  | 18.0  | 18.0  |       | 18.0  |       | 18.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     |       | 0     |       | 0     |
| 90th %ile Green (s)     | 18.5  | 18.5  | 18.5  | 18.5  | 6.0   | 77.8  | 6.7   | 78.5  |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 15.2  | 15.2  | 15.2  | 15.2  | 0.0   | 81.6  | 6.2   | 92.8  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Skip  | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 12.9  | 12.9  | 12.9  | 12.9  | 0.0   | 84.2  | 5.9   | 95.1  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Skip  | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 10.5  | 10.5  | 10.5  | 10.5  | 0.0   | 97.5  | 0.0   | 97.5  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Skip  | Coord | Skip  | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 114.0 | 0.0   | 114.0 |
| 10th %ile Term Code     | Skip  | Skip  | Skip  | Skip  | Skip  | Coord | Skip  | Coord |

**Intersection Summary**

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 60 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
 18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent

Existing 2010  
 AM PEAK

| Lane Group          | EBL   | EBT   | EBR  | WBL  | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT  | SBR  |       |
|---------------------|-------|-------|------|------|-------|------|-------|-------|------|-------|------|------|-------|
| Lane Configurations | ↔     | ↔     | ↔    | ↔    | ↔     | ↔    | ↔     | ↔     | ↔    | ↔     | ↔    | ↔    |       |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900 |       |
| Lane Width (ft)     | 12    | 12    | 12   | 12   | 12    | 12   | 12    | 12    | 12   | 12    | 12   | 12   |       |
| Grade (%)           | 0%    |       | 0%   |      | 0%    |      | 0%    |       | 0%   |       | 0%   |      |       |
| Storage Length (ft) | 235   |       | 0    | 0    |       | 20   | 235   |       | 0    | 150   |      | 170  |       |
| Storage Lanes       | 1     |       | 1    | 0    |       | 1    | 1     |       | 0    | 1     |      | 1    |       |
| Taper Length (ft)   | 50    |       |      | 50   |       |      | 50    |       |      | 50    |      |      |       |
| Lane Util. Factor   | 0.95  | 0.95  | 1.00 | 1.00 | 1.00  | 1.00 | 0.97  | 0.95  | 0.95 | 1.00  | 0.95 | 1.00 |       |
| Ped Bike Factor     |       |       |      |      |       |      | 0.97  |       |      |       |      | 0.98 |       |
| Frt                 | 0.850 |       |      |      |       |      | 0.850 | 0.999 |      |       |      |      | 0.850 |
| Flt Protected       | 0.950 | 0.955 |      |      | 0.968 |      | 0.950 |       |      | 0.950 |      |      |       |
| Satd. Flow (prot)   | 1681  | 1690  | 1583 | 0    | 1803  | 1583 | 3433  | 3536  | 0    | 1770  | 3539 | 1417 |       |
| Flt Permitted       | 0.950 | 0.955 |      |      | 0.968 |      | 0.950 |       |      | 0.950 |      |      |       |
| Satd. Flow (perm)   | 1681  | 1690  | 1583 | 0    | 1803  | 1532 | 3433  | 3536  | 0    | 1770  | 3539 | 1387 |       |
| Right Turn on Red   | Yes   |       | Yes  |      | Yes   |      | Yes   |       | Yes  |       | Yes  |      |       |
| Satd. Flow (RTOR)   | 672   |       |      |      |       |      | 16    |       |      |       |      | 91   |       |
| Link Speed (mph)    | 35    |       |      |      | 15    |      |       |       | 35   |       |      |      |       |
| Link Distance (ft)  | 1573  |       |      |      | 252   |      |       |       | 414  |       |      |      |       |
| Travel Time (s)     | 30.6  |       |      |      | 11.5  |      |       |       | 8.1  |       |      |      |       |

Intersection Summary

Area Type: Other

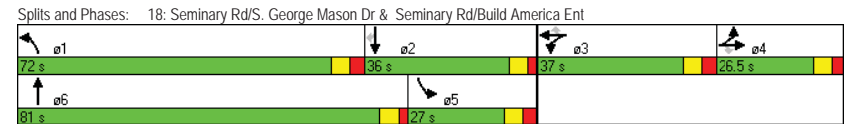
Timings  
 18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent

Existing 2010  
 AM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 150   | 5     | 625   | 10    | 15    | 760   | 850   | 20    | 420   | 100   |
| Turn Type            | Split | NA    | Perm  | NA    | Perm  | Prot  | NA    | Prot  | NA    | Perm  |
| Protected Phases     | 4     | 4     |       | 3     |       | 1     | 6     | 5     | 2     |       |
| Permitted Phases     |       |       | 4     |       | 3     |       |       |       |       | 2     |
| Detector Phase       | 4     | 4     | 4     | 3     | 3     | 1     | 6     | 5     | 2     | 2     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 11.5  | 11.5  | 11.5  | 37.0  | 37.0  | 12.0  | 11.0  | 12.0  | 11.0  | 11.0  |
| Total Split (s)      | 26.5  | 26.5  | 26.5  | 37.0  | 37.0  | 72.0  | 81.0  | 27.0  | 36.0  | 36.0  |
| Total Split (%)      | 15.5% | 15.5% | 15.5% | 21.6% | 21.6% | 42.0% | 47.2% | 15.7% | 21.0% | 21.0% |
| Yellow Time (s)      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 2.5   | 2.5   | 2.5   | 3.0   | 3.0   | 3.0   | 2.0   | 3.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | -3.0  | -3.0  | -3.0  | -2.0  | -3.0  | -2.0  | -2.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lag   | Lag   | Lag   | Lead  | Lead  | Lead  | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | Min   | None  | None  | None  |
| Act Effct Green (s)  | 16.0  | 16.0  | 16.0  | 14.1  | 14.1  | 35.9  | 54.1  | 14.9  | 22.4  | 22.4  |
| Actuated g/C Ratio   | 0.16  | 0.16  | 0.16  | 0.14  | 0.14  | 0.35  | 0.53  | 0.15  | 0.22  | 0.22  |
| v/c Ratio            | 0.31  | 0.32  | 0.82  | 0.13  | 0.07  | 0.67  | 0.49  | 0.08  | 0.58  | 0.29  |
| Control Delay        | 49.9  | 50.0  | 13.5  | 46.9  | 20.9  | 33.7  | 23.1  | 46.1  | 43.0  | 15.2  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 49.9  | 50.0  | 13.5  | 46.9  | 20.9  | 33.7  | 23.1  | 46.1  | 43.0  | 15.2  |
| LOS                  | D     | D     | B     | D     | C     | C     | C     | D     | D     | B     |
| Approach Delay       | 20.7  |       | 38.4  |       | 28.1  |       | 38.0  |       |       |       |
| Approach LOS         | C     |       | D     |       | C     |       | D     |       |       |       |

Intersection Summary

Cycle Length: 171.5  
 Actuated Cycle Length: 101.8  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay: 28.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 71.3%  
 ICU Level of Service C  
 Analysis Period (min) 15



Phasings Existing 2010  
AM PEAK  
18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent

| Lane Group              | EBL   | EBT   | EBR   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 4     | 4     |       | 3     |       | 1     | 6     | 5     | 2     |       |
| Permitted Phases        |       |       | 4     |       | 3     |       |       |       |       | 2     |
| Minimum Initial (s)     | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)       | 11.5  | 11.5  | 11.5  | 37.0  | 37.0  | 12.0  | 11.0  | 12.0  | 11.0  | 11.0  |
| Total Split (s)         | 26.5  | 26.5  | 26.5  | 37.0  | 37.0  | 72.0  | 81.0  | 27.0  | 36.0  | 36.0  |
| Total Split (%)         | 15.5% | 15.5% | 15.5% | 21.6% | 21.6% | 42.0% | 47.2% | 15.7% | 21.0% | 21.0% |
| Maximum Green (s)       | 20.0  | 20.0  | 20.0  | 30.0  | 30.0  | 65.0  | 75.0  | 20.0  | 30.0  | 30.0  |
| Yellow Time (s)         | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 2.5   | 2.5   | 2.5   | 3.0   | 3.0   | 3.0   | 2.0   | 3.0   | 2.0   | 2.0   |
| Lead/Lag                | Lag   | Lag   | Lag   | Lead  | Lead  | Lead  | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | Min   | Min   | None  | None  | None  |
| Walk Time (s)           |       |       |       | 7.0   | 7.0   |       |       |       |       |       |
| Flash Dont Walk (s)     |       |       |       | 23.0  | 23.0  |       |       |       |       |       |
| Pedestrian Calls (#/hr) |       |       |       | 5     | 5     |       |       |       |       |       |
| 90th %ile Green (s)     | 20.0  | 20.0  | 20.0  | 30.0  | 30.0  | 51.4  | 56.3  | 25.1  | 30.0  | 30.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Ped   | Ped   | Gap   | Gap   | Hold  | Max   | Max   |
| 70th %ile Green (s)     | 17.4  | 17.4  | 17.4  | 8.9   | 8.9   | 37.1  | 41.2  | 18.5  | 22.6  | 22.6  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Hold  | Gap   | Gap   |
| 50th %ile Green (s)     | 12.0  | 12.0  | 12.0  | 7.7   | 7.7   | 31.1  | 57.2  | 0.0   | 19.1  | 19.1  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Hold  | Skip  | Gap   | Gap   |
| 30th %ile Green (s)     | 10.2  | 10.2  | 10.2  | 6.7   | 6.7   | 26.8  | 50.3  | 0.0   | 16.5  | 16.5  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Hold  | Skip  | Gap   | Gap   |
| 10th %ile Green (s)     | 6.9   | 6.9   | 6.9   | 0.0   | 0.0   | 17.3  | 36.1  | 0.0   | 11.8  | 11.8  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Skip  | Skip  | Gap   | Hold  | Skip  | Gap   | Gap   |

| Intersection Summary      |                        |
|---------------------------|------------------------|
| Cycle Length:             | 171.5                  |
| Actuated Cycle Length:    | 101.8                  |
| Control Type:             | Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: | 157.9                  |
| 70th %ile Actuated Cycle: | 112.5                  |
| 50th %ile Actuated Cycle: | 96.4                   |
| 30th %ile Actuated Cycle: | 86.7                   |
| 10th %ile Actuated Cycle: | 55.5                   |

Lanes and Geometrics Existing 2010  
AM PEAK  
20: Hampton Dr & Braddock Rd

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL  | NBT   | NBR   | SBL  | SBT  | SBR   |
|---------------------|-------|-------|------|-------|-------|------|------|-------|-------|------|------|-------|
| Lane Configurations |       |       |      |       |       |      |      |       |       |      |      |       |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   | 12   | 12    | 12    | 12   | 12   | 12    |
| Grade (%)           |       | 0%    |      |       | 0%    |      |      | 0%    |       |      | 0%   |       |
| Storage Length (ft) | 170   |       | 0    | 125   |       | 0    | 0    |       | 0     | 0    |      | 0     |
| Storage Lanes       | 1     |       | 0    | 1     |       | 0    | 0    |       | 1     | 0    |      | 1     |
| Taper Length (ft)   | 50    |       |      | 50    |       |      | 50   |       |       | 50   |      |       |
| 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  |
| Ped Bike Factor     |       | 1.00  |      |       | 1.00  |      |      |       |       |      |      | 0.99  |
| Frt                 |       | 0.993 |      |       | 0.969 |      |      |       | 0.850 |      |      | 0.850 |
| Flt Protected       | 0.950 |       |      | 0.950 |       |      |      | 0.985 |       |      |      | 0.955 |
| Satd. Flow (prot)   | 1770  | 3512  | 0    | 1770  | 3421  | 0    | 0    | 1835  | 1583  | 0    | 1779 | 1583  |
| Flt Permitted       | 0.249 |       |      | 0.595 |       |      |      | 0.868 |       |      |      | 0.662 |
| Satd. Flow (perm)   | 464   | 3512  | 0    | 1108  | 3421  | 0    | 0    | 1617  | 1583  | 0    | 1233 | 1561  |
| Right Turn on Red   |       |       | Yes  |       |       | Yes  |      |       | Yes   |      |      | Yes   |
| Satd. Flow (RTOR)   |       | 7     |      |       | 48    |      |      |       | 43    |      |      | 75    |
| Link Speed (mph)    |       | 35    |      |       | 35    |      |      | 25    |       |      |      | 25    |
| Link Distance (ft)  |       | 1885  |      |       | 1164  |      |      | 416   |       |      |      | 1404  |
| Travel Time (s)     |       | 36.7  |      |       | 22.7  |      |      | 11.3  |       |      |      | 38.3  |

| Intersection Summary |       |
|----------------------|-------|
| Area Type:           | Other |

Timings  
20: Hampton Dr & Braddock Rd

Existing 2010  
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |
| Volume (vph)         | 110   | 225   | 20    | 700   | 30    | 70    | 40    | 75    | 5     | 70    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | Perm  | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     |       | 3     |       |       | 3     |       |
| Permitted Phases     | 6     |       | 2     |       | 3     |       | 3     | 3     |       | 3     |
| Detector Phase       | 1     | 6     | 5     | 2     | 3     | 3     | 3     | 3     | 3     | 3     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 9.0   | 16.5  | 9.0   | 16.5  | 12.0  | 12.0  | 12.0  | 12.0  | 12.0  | 12.0  |
| Total Split (s)      | 20.0  | 51.5  | 20.0  | 51.5  | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  |
| Total Split (%)      | 21.6% | 55.7% | 21.6% | 55.7% | 22.7% | 22.7% | 22.7% | 22.7% | 22.7% | 22.7% |
| Yellow Time (s)      | 3.0   | 3.5   | 3.0   | 3.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| 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)  | 5.0   | 6.5   | 5.0   | 6.5   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   |       |       |       |       |       |       |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   |       |       |       |       |       |       |
| Recall Mode          | None  | Max   | None  | Max   | None  | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 54.8  | 50.6  | 50.8  | 45.5  |       | 9.7   | 9.7   |       | 9.7   | 9.7   |
| Actuated g/C Ratio   | 0.71  | 0.66  | 0.66  | 0.59  |       | 0.13  | 0.13  |       | 0.13  | 0.13  |
| v/c Ratio            | 0.27  | 0.11  | 0.03  | 0.46  |       | 0.52  | 0.18  |       | 0.55  | 0.28  |
| Control Delay        | 5.2   | 6.2   | 4.0   | 10.4  |       | 41.5  | 12.0  |       | 45.9  | 11.0  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |
| Total Delay          | 5.2   | 6.2   | 4.0   | 10.4  |       | 41.5  | 12.0  |       | 45.9  | 11.0  |
| LOS                  | A     | A     | A     | B     |       | D     | B     |       | D     | B     |
| Approach Delay       |       | 5.9   |       | 10.2  |       | 33.1  |       |       | 29.7  |       |
| Approach LOS         |       | A     |       | B     |       | C     |       |       | C     |       |

Intersection Summary

Cycle Length: 92.5  
 Actuated Cycle Length: 76.7  
 Natural Cycle: 50  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.55  
 Intersection Signal Delay: 13.2  
 Intersection LOS: B  
 Intersection Capacity Utilization 57.8%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 20: Hampton Dr & Braddock Rd



Phasings  
20: Hampton Dr & Braddock Rd

Existing 2010  
AM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 1     | 6     | 5     | 2     |       | 3     |       |       | 3     |       |
| Permitted Phases        | 6     |       | 2     |       | 3     |       | 3     | 3     |       | 3     |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 9.0   | 16.5  | 9.0   | 16.5  | 12.0  | 12.0  | 12.0  | 12.0  | 12.0  | 12.0  |
| Total Split (s)         | 20.0  | 51.5  | 20.0  | 51.5  | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  |
| Total Split (%)         | 21.6% | 55.7% | 21.6% | 55.7% | 22.7% | 22.7% | 22.7% | 22.7% | 22.7% | 22.7% |
| Maximum Green (s)       | 15.0  | 45.0  | 15.0  | 45.0  | 15.0  | 15.0  | 15.0  | 15.0  | 15.0  | 15.0  |
| Yellow Time (s)         | 3.0   | 3.5   | 3.0   | 3.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   |       |       |       |       |       |       |
| Lead-Lag Optimize?      | Yes   | Yes   | Yes   | Yes   |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 4.0   | 2.0   | 4.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | Max   | None  | Max   | None  | None  | None  | None  | None  | None  |
| Walk Time (s)           |       |       |       |       | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |       |       |       | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  |
| Pedestrian Calls (#/hr) |       |       |       |       | 0     | 0     | 0     | 0     | 0     | 0     |
| 90th %ile Green (s)     | 7.9   | 47.5  | 5.4   | 45.0  | 15.0  | 15.0  | 15.0  | 15.0  | 15.0  | 15.0  |
| 90th %ile Term Code     | Gap   | Hold  | Gap   | MaxR  | Max   | Max   | Max   | Max   | Max   | Max   |
| 70th %ile Green (s)     | 6.7   | 46.7  | 5.0   | 45.0  | 11.9  | 11.9  | 11.9  | 11.9  | 11.9  | 11.9  |
| 70th %ile Term Code     | Gap   | Hold  | Gap   | MaxR  | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |
| 50th %ile Green (s)     | 6.0   | 56.0  | 0.0   | 45.0  | 9.8   | 9.8   | 9.8   | 9.8   | 9.8   | 9.8   |
| 50th %ile Term Code     | Gap   | Hold  | Skip  | MaxR  | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |
| 30th %ile Green (s)     | 5.4   | 55.4  | 0.0   | 45.0  | 7.8   | 7.8   | 7.8   | 7.8   | 7.8   | 7.8   |
| 30th %ile Term Code     | Gap   | Hold  | Skip  | MaxR  | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |
| 10th %ile Green (s)     | 0.0   | 45.0  | 0.0   | 45.0  | 5.3   | 5.3   | 5.3   | 5.3   | 5.3   | 5.3   |
| 10th %ile Term Code     | Skip  | MaxR  | Skip  | MaxR  | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |

Intersection Summary

Cycle Length: 92.5  
 Actuated Cycle Length: 76.7  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 85.4  
 70th %ile Actuated Cycle: 81.1  
 50th %ile Actuated Cycle: 78.3  
 30th %ile Actuated Cycle: 75.7  
 10th %ile Actuated Cycle: 62.8

Lanes and Geometrics  
23: Library Ln & Seminary Rd

Existing 2010  
AM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL  | NBT   | NBR   | SBL  | SBT   | SBR  |
|---------------------|-------|------|------|-------|-------|------|------|-------|-------|------|-------|------|
| Lane Configurations | ↔     | ↔↔   | ↔    | ↔     | ↔↔    | ↔    |      | ↕     | ↔     | ↔    | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12   | 12   | 12    | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |      | 0%   |       | 0%    |      | 0%   |       | 0%    |      | 0%    |      |
| Storage Length (ft) | 150   |      | 0    | 45    |       | 0    | 0    |       | 0     | 0    |       | 0    |
| Storage Lanes       | 1     |      | 0    | 1     |       | 0    | 0    |       | 0     | 0    |       | 0    |
| Taper Length (ft)   | 50    |      |      | 50    |       |      | 50   |       |       | 50   |       |      |
| Lane Util. Factor   | 1.00  | 0.91 | 0.91 | 1.00  | 0.91  | 0.91 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 |
| Ped Bike Factor     | 1.00  | 1.00 |      | 0.95  | 1.00  |      |      | 0.90  |       |      | 0.95  |      |
| Frt                 | 0.998 |      |      |       | 0.990 |      |      |       | 0.979 |      | 0.963 |      |
| Flt Protected       | 0.950 |      |      | 0.950 |       |      |      | 0.963 |       |      | 0.965 |      |
| Satd. Flow (prot)   | 1770  | 5067 | 0    | 1770  | 5027  | 0    | 0    | 1750  | 0     | 0    | 1661  | 0    |
| Flt Permitted       | 0.130 |      |      | 0.352 |       |      |      | 0.801 |       |      | 0.795 |      |
| Satd. Flow (perm)   | 242   | 5067 | 0    | 625   | 5027  | 0    | 0    | 1313  | 0     | 0    | 1359  | 0    |
| Right Turn on Red   |       |      | Yes  |       |       | No   |      |       | Yes   |      |       | Yes  |
| Satd. Flow (RTOR)   | 3     |      |      |       |       |      | 7    |       |       |      | 14    |      |
| Link Speed (mph)    | 35    |      |      |       | 35    |      |      |       | 35    |      | 25    |      |
| Link Distance (ft)  | 248   |      |      |       | 233   |      | 634  |       |       |      | 705   |      |
| Travel Time (s)     | 4.8   |      |      |       | 4.5   |      | 12.4 |       |       |      | 19.2  |      |

Intersection Summary

Area Type: Other

Timings  
23: Library Ln & Seminary Rd

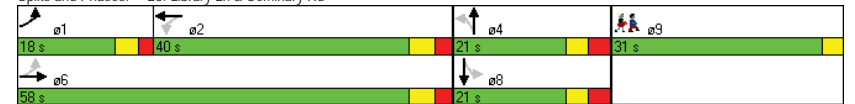
Existing 2010  
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | ø9   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔↔    |       | ↕     | ↔     | ↔     |      |
| Volume (vph)         | 210   | 695   | 20    | 1300  | 50    | 5     | 40    | 0     |      |
| Turn Type            | pm+pt | NA    | Perm  | NA    | Perm  | NA    | Perm  | NA    |      |
| Protected Phases     | 1     | 6     |       | 2     |       | 4     |       | 8     | 9    |
| Permitted Phases     | 6     |       | 2     |       | 4     |       | 8     |       |      |
| Detector Phase       | 1     | 6     | 2     | 2     | 4     | 4     | 8     | 8     |      |
| Switch Phase         |       |       |       |       |       |       |       |       |      |
| Minimum Initial (s)  | 7.0   | 30.0  | 30.0  | 30.0  | 8.0   | 8.0   | 8.0   | 8.0   | 4.0  |
| Minimum Split (s)    | 12.0  | 36.0  | 36.0  | 36.0  | 21.0  | 21.0  | 21.0  | 21.0  | 31.0 |
| Total Split (s)      | 18.0  | 58.0  | 40.0  | 40.0  | 21.0  | 21.0  | 21.0  | 21.0  | 31.0 |
| Total Split (%)      | 16.4% | 52.7% | 36.4% | 36.4% | 19.1% | 19.1% | 19.1% | 19.1% | 28%  |
| Yellow Time (s)      | 3.0   | 3.5   | 3.5   | 3.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| All-Red Time (s)     | 2.0   | 2.5   | 2.5   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0   | 0.0  |
| 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)  | 5.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   |      |
| Lead/Lag             | Lead  |       | Lag   | Lag   |       |       |       |       |      |
| Lead-Lag Optimize?   | Yes   |       | Yes   | Yes   |       |       |       |       |      |
| Recall Mode          | None  | C-Max | C-Max | C-Max | None  | None  | None  | None  | None |
| Act Effct Green (s)  | 90.7  | 90.9  | 73.0  | 73.0  |       | 11.1  |       | 11.1  |      |
| Actuated g/C Ratio   | 0.82  | 0.83  | 0.66  | 0.66  |       | 0.10  |       | 0.10  |      |
| v/c Ratio            | 0.62  | 0.18  | 0.05  | 0.45  |       | 0.51  |       | 0.40  |      |
| Control Delay        | 15.4  | 2.8   | 6.2   | 5.2   |       | 54.1  |       | 43.8  |      |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.1   |       | 0.0   |       | 0.0   |      |
| Total Delay          | 15.4  | 2.8   | 6.2   | 5.3   |       | 54.1  |       | 43.8  |      |
| LOS                  | B     | A     | A     | A     |       | D     |       | D     |      |
| Approach Delay       |       | 5.7   |       | 5.3   |       | 54.1  |       | 43.8  |      |
| Approach LOS         |       | A     |       | A     |       | D     |       | D     |      |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 80 (73%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.62  
 Intersection Signal Delay: 7.6  
 Intersection Capacity Utilization 71.7%  
 Intersection LOS: A  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 23: Library Ln & Seminary Rd



Phasings  
23: Library Ln & Seminary Rd

Existing 2010  
AM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | ø9   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Protected Phases        | 1     | 6     |       | 2     |       | 4     |       | 8     | 9    |
| Permitted Phases        | 6     |       | 2     |       | 4     |       | 8     |       |      |
| Minimum Initial (s)     | 7.0   | 30.0  | 30.0  | 30.0  | 8.0   | 8.0   | 8.0   | 8.0   | 4.0  |
| Total Split (s)         | 18.0  | 58.0  | 40.0  | 40.0  | 21.0  | 21.0  | 21.0  | 21.0  | 31.0 |
| Total Split (%)         | 16.4% | 52.7% | 36.4% | 36.4% | 19.1% | 19.1% | 19.1% | 19.1% | 28%  |
| Maximum Green (s)       | 13.0  | 52.0  | 34.0  | 34.0  | 15.0  | 15.0  | 15.0  | 15.0  | 28.0 |
| Yellow Time (s)         | 3.0   | 3.5   | 3.5   | 3.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| All-Red Time (s)        | 2.0   | 2.5   | 2.5   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0   | 0.0  |
| 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   | 3.0   | 3.0   | 3.0  |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Recall Mode             | None  | C-Max | C-Max | C-Max | None  | None  | None  | None  | None |
| Walk Time (s)           |       |       |       |       |       |       |       |       | 4.0  |
| Flash Dont Walk (s)     |       |       |       |       |       |       |       |       | 24.0 |
| Pedestrian Calls (#/hr) |       |       |       |       |       |       |       |       | 0    |
| 90th %ile Green (s)     | 13.0  | 83.0  | 65.0  | 65.0  | 15.0  | 15.0  | 15.0  | 15.0  | 0.0  |
| 90th %ile Term Code     | Max   | Coord | Coord | Coord | Max   | Max   | Hold  | Hold  | Skip |
| 70th %ile Green (s)     | 13.0  | 85.1  | 67.1  | 67.1  | 12.9  | 12.9  | 12.9  | 12.9  | 0.0  |
| 70th %ile Term Code     | Max   | Coord | Coord | Coord | Gap   | Gap   | Hold  | Hold  | Skip |
| 50th %ile Green (s)     | 13.0  | 87.2  | 69.2  | 69.2  | 10.8  | 10.8  | 10.8  | 10.8  | 0.0  |
| 50th %ile Term Code     | Max   | Coord | Coord | Coord | Gap   | Gap   | Hold  | Hold  | Skip |
| 30th %ile Green (s)     | 11.7  | 89.3  | 72.6  | 72.6  | 8.7   | 8.7   | 8.7   | 8.7   | 0.0  |
| 30th %ile Term Code     | Gap   | Coord | Coord | Coord | Gap   | Gap   | Hold  | Hold  | Skip |
| 10th %ile Green (s)     | 7.8   | 104.0 | 91.2  | 91.2  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| 10th %ile Term Code     | Gap   | Coord | Coord | Coord | Skip  | Skip  | Skip  | Skip  | Skip |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 80 (73%), Referenced to phase 2-WBTL and 6-EBTL, Start of Yellow  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
33: Seminary Rd (S)/Seminary Rd (N) & Seminary Rd

Existing 2010  
AM PEAK

| Lane Group          | EBL  | EBT  | EBR  | WBL  | WBT   | WBR   | NBL  | NBT  | NBR   | SBL  | SBT  | SBR  |  |
|---------------------|------|------|------|------|-------|-------|------|------|-------|------|------|------|--|
| Lane Configurations |      | ↑↑   |      |      | ↑↑    | ↑↑    |      |      | ↑     |      |      |      |  |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |  |
| Lane Width (ft)     | 12   | 12   | 12   | 12   | 12    | 12    | 12   | 12   | 12    | 12   | 12   | 12   |  |
| Grade (%)           |      | 0%   |      |      | 0%    |       |      | 0%   |       |      | 0%   |      |  |
| Storage Length (ft) | 0    |      | 0    | 0    |       | 0     | 0    |      | 0     | 0    |      | 0    |  |
| Storage Lanes       | 0    |      | 0    | 0    |       | 1     | 0    |      | 1     | 0    |      | 0    |  |
| Taper Length (ft)   | 50   |      |      | 50   |       |       | 50   |      |       | 50   |      |      |  |
| Lane Util. Factor   | 1.00 | 0.95 | 1.00 | 1.00 | 0.91  | 0.91  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 |  |
| Ped Bike Factor     |      |      |      |      | 0.957 | 0.850 |      |      | 0.865 |      |      |      |  |
| Frnt                |      |      |      |      |       |       |      |      |       |      |      |      |  |
| Flt Protected       |      |      |      |      |       |       |      |      |       |      |      |      |  |
| Satd. Flow (prot)   | 0    | 3539 | 0    | 0    | 3244  | 1441  | 0    | 0    | 1611  | 0    | 0    | 0    |  |
| Flt Permitted       |      |      |      |      |       |       |      |      |       |      |      |      |  |
| Satd. Flow (perm)   | 0    | 3539 | 0    | 0    | 3244  | 1441  | 0    | 0    | 1611  | 0    | 0    | 0    |  |
| Link Speed (mph)    |      | 35   |      |      | 35    |       |      | 35   |       |      | 30   |      |  |
| Link Distance (ft)  |      | 1551 |      |      | 105   |       |      | 418  |       |      | 284  |      |  |
| Travel Time (s)     |      | 30.2 |      |      | 2.0   |       |      | 8.1  |       |      | 6.5  |      |  |

Intersection Summary

Area Type: Other

Lanes and Geometrics  
41: Van Dorn St & Kenmore Ave

Existing 2010  
AM PEAK

| Lane Group          | WBL   | WBR   | NBT   | NBR  | SBL  | SBT   |
|---------------------|-------|-------|-------|------|------|-------|
| Lane Configurations | ↔     | ↔     | ↕     | ↕    | ↔    | ↕     |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900  | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12    | 12   | 12   | 12    |
| Grade (%)           | 0%    |       | 0%    |      |      | 0%    |
| Storage Length (ft) | 0     | 50    |       | 0    | 0    |       |
| Storage Lanes       | 1     | 1     |       | 0    | 0    |       |
| Taper Length (ft)   | 50    |       |       |      | 50   |       |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95  | 0.95 | 0.95 | 0.95  |
| Ped Bike Factor     |       | 0.99  | 1.00  |      |      |       |
| Frt                 |       | 0.850 | 0.993 |      |      |       |
| Flt Protected       | 0.950 |       |       |      |      | 0.998 |
| Satd. Flow (prot)   | 1770  | 1583  | 3509  | 0    | 0    | 3532  |
| Flt Permitted       | 0.950 |       |       |      |      | 0.826 |
| Satd. Flow (perm)   | 1770  | 1562  | 3509  | 0    | 0    | 2923  |
| Right Turn on Red   |       | Yes   |       | Yes  |      |       |
| Satd. Flow (RTOR)   |       | 16    | 9     |      |      |       |
| Link Speed (mph)    | 30    |       | 35    |      |      | 35    |
| Link Distance (ft)  | 805   |       | 2951  |      |      | 2586  |
| Travel Time (s)     | 18.3  |       | 57.5  |      |      | 50.4  |

Intersection Summary

Area Type: Other

Timings  
41: Van Dorn St & Kenmore Ave

Existing 2010  
AM PEAK

| Lane Group           | WBL   | WBR   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↕     | ↔     | ↕     |
| Volume (vph)         | 55    | 105   | 2080  | 10    | 225   |
| Turn Type            | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 2     |       | 1     |       | 1     |
| Permitted Phases     |       | 2     |       | 1     |       |
| Detector Phase       | 2     | 2     | 1     | 1     | 1     |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)    | 27.5  | 27.5  | 29.0  | 29.0  | 29.0  |
| Total Split (s)      | 29.0  | 29.0  | 101.0 | 101.0 | 101.0 |
| Total Split (%)      | 22.3% | 22.3% | 77.7% | 77.7% | 77.7% |
| Yellow Time (s)      | 3.5   | 3.5   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.5   | 5.5   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             | Lag   | Lag   | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?   |       |       |       |       |       |
| Recall Mode          | None  | None  | C-Max | C-Max | C-Max |
| Act Effct Green (s)  | 14.5  | 14.5  | 104.0 |       | 104.0 |
| Actuated g/C Ratio   | 0.11  | 0.11  | 0.80  |       | 0.80  |
| v/c Ratio            | 0.30  | 0.60  | 0.83  |       | 0.11  |
| Control Delay        | 55.3  | 59.5  | 9.6   |       | 3.3   |
| Queue Delay          | 0.0   | 0.0   | 0.0   |       | 0.0   |
| Total Delay          | 55.3  | 59.5  | 9.6   |       | 3.3   |
| LOS                  | E     | E     | A     |       | A     |
| Approach Delay       | 58.0  |       | 9.6   |       | 3.3   |
| Approach LOS         | E     |       | A     |       | A     |

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 34 (26%), Referenced to phase 1:NBSB, Start of Green  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.83  
 Intersection Signal Delay: 12.0  
 Intersection Capacity Utilization 77.1%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service D

Splits and Phases: 41: Van Dorn St & Kenmore Ave



Phasings

41: Van Dorn St & Kenmore Ave

Existing 2010  
AM PEAK

| Lane Group              | WBL   | WBR   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|
| Protected Phases        | 2     |       | 1     |       | 1     |
| Permitted Phases        |       | 2     |       | 1     |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 27.5  | 27.5  | 29.0  | 29.0  | 29.0  |
| Total Split (s)         | 29.0  | 29.0  | 101.0 | 101.0 | 101.0 |
| Total Split (%)         | 22.3% | 22.3% | 77.7% | 77.7% | 77.7% |
| Maximum Green (s)       | 23.5  | 23.5  | 95.0  | 95.0  | 95.0  |
| Yellow Time (s)         | 3.5   | 3.5   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lag   | Lag   | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?      |       |       |       |       |       |
| Vehicle Extension (s)   | 4.0   | 4.0   | 0.2   | 0.2   | 0.2   |
| Minimum Gap (s)         | 4.0   | 4.0   | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | C-Max | C-Max | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     | 15.0  | 15.0  | 16.0  | 16.0  | 16.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     |
| 90th %ile Green (s)     | 20.4  | 20.4  | 98.1  | 98.1  | 98.1  |
| 90th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord |
| 70th %ile Green (s)     | 16.9  | 16.9  | 101.6 | 101.6 | 101.6 |
| 70th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord |
| 50th %ile Green (s)     | 14.5  | 14.5  | 104.0 | 104.0 | 104.0 |
| 50th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord |
| 30th %ile Green (s)     | 12.1  | 12.1  | 106.4 | 106.4 | 106.4 |
| 30th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord |
| 10th %ile Green (s)     | 8.6   | 8.6   | 109.9 | 109.9 | 109.9 |
| 10th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord |

Intersection Summary

|  |
|--|
| Cycle Length: 130  |
| Actuated Cycle Length: 130                                   |
| Offset: 34 (26%), Referenced to phase 1:NBSB, Start of Green |
| Control Type: Actuated-Coordinated                           |

Lanes and Geometrics

42: Van Dorn St & Sanger Ave/Richenbacher Ave

Existing 2010  
AM PEAK

| Lane Group          | EBL  | EBT   | EBR  | WBL  | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|---------------------|------|-------|------|------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations |      | ↕     | ↕    |      | ↕     |      | ↕     | ↕     |      | ↕     | ↕     |      |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12   | 12   | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           |      | 0%    |      |      | 0%    |      |       | 0%    |      |       | 0%    |      |
| Storage Length (ft) | 0    |       | 0    | 0    |       | 0    | 390   |       | 0    | 140   |       | 0    |
| Storage Lanes       | 0    |       | 1    | 0    |       | 0    | 1     |       | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50   |       |      | 50   |       |      | 50    |       |      | 50    |       |      |
| 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     |      |       |      |      | 0.99  |      |       | 1.00  |      |       | 1.00  |      |
| Frt                 |      | 0.850 |      |      | 0.932 |      |       | 0.999 |      |       | 0.985 |      |
| Flt Protected       |      | 0.967 |      |      | 0.995 |      | 0.950 |       |      | 0.950 |       |      |
| Satd. Flow (prot)   | 0    | 1801  | 1583 | 0    | 1702  | 0    | 1770  | 3535  | 0    | 1770  | 3481  | 0    |
| Flt Permitted       |      | 0.603 |      |      | 0.952 |      | 0.511 |       |      | 0.061 |       |      |
| Satd. Flow (perm)   | 0    | 1123  | 1583 | 0    | 1628  | 0    | 952   | 3535  | 0    | 114   | 3481  | 0    |
| Right Turn on Red   |      |       | No   |      |       | Yes  |       |       | Yes  |       |       | Yes  |
| Satd. Flow (RTOR)   |      |       |      |      | 35    |      |       | 1     |      |       | 8     |      |
| Link Speed (mph)    |      | 25    |      |      | 25    |      |       | 35    |      |       | 35    |      |
| Link Distance (ft)  |      | 2026  |      |      | 1172  |      |       | 844   |      |       | 2951  |      |
| Travel Time (s)     |      | 55.3  |      |      | 32.0  |      |       | 16.4  |      |       | 57.5  |      |

Intersection Summary

|                  |
|------------------|
| Area Type: Other |
|------------------|



**Timings**  
42: Van Dorn St & Sanger Ave/Richenbacher Ave

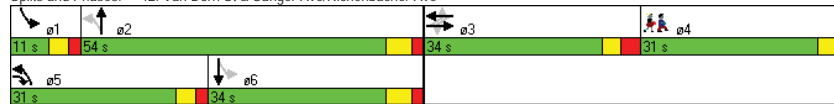
Existing 2010  
AM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | ø4   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations  |       | ↕     | ↕     |       | ↕     | ↕     | ↕     | ↕     | ↕     |      |
| Volume (vph)         | 125   | 60    | 200   | 15    | 55    | 380   | 1895  | 15    | 270   |      |
| Turn Type            | Perm  | NA    | Over  | Perm  | NA    | pm+pt | NA    | pm+pt | NA    |      |
| Protected Phases     |       | 3     | 5     |       | 3     | 5     | 2     | 1     | 6     | 4    |
| Permitted Phases     |       | 3     |       | 3     |       | 2     |       | 6     |       |      |
| Detector Phase       | 3     | 3     | 5     | 3     | 3     | 5     | 2     | 1     | 6     |      |
| Switch Phase         |       |       |       |       |       |       |       |       |       |      |
| Minimum Initial (s)  | 10.0  | 10.0  | 8.0   | 10.0  | 10.0  | 8.0   | 10.0  | 4.0   | 10.0  | 1.0  |
| Minimum Split (s)    | 16.0  | 16.0  | 13.0  | 16.0  | 16.0  | 13.0  | 16.0  | 9.0   | 16.0  | 30.0 |
| Total Split (s)      | 34.0  | 34.0  | 31.0  | 34.0  | 34.0  | 31.0  | 54.0  | 11.0  | 34.0  | 31.0 |
| Total Split (%)      | 26.2% | 26.2% | 23.8% | 26.2% | 26.2% | 23.8% | 41.5% | 8.5%  | 26.2% | 24%  |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   | 3.0  |
| All-Red Time (s)     | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.0  |
| 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)  | 6.0   | 6.0   | 5.0   | 6.0   | 6.0   | 5.0   | 6.0   | 5.0   | 6.0   |      |
| Lead/Lag             | Lead  | Lead  | Lead  | Lead  | Lead  | Lead  | Lag   | Lead  | Lag   | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |      |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max | None  |      |
| Act Effct Green (s)  |       | 25.8  | 22.1  |       | 25.8  | 93.2  | 87.3  | 73.1  | 65.1  |      |
| Actuated g/C Ratio   |       | 0.20  | 0.17  |       | 0.20  | 0.72  | 0.67  | 0.56  | 0.50  |      |
| v/c Ratio            |       | 0.89  | 0.80  |       | 0.43  | 0.50  | 0.87  | 0.10  | 0.18  |      |
| Control Delay        |       | 88.5  | 72.5  |       | 38.0  | 7.1   | 26.0  | 11.1  | 16.4  |      |
| Queue Delay          |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      |
| Total Delay          |       | 88.5  | 72.5  |       | 38.0  | 7.1   | 26.0  | 11.1  | 16.4  |      |
| LOS                  |       | F     | E     |       | D     | A     | C     | B     | B     |      |
| Approach Delay       |       | 80.2  |       |       | 38.0  |       | 22.9  |       | 16.1  |      |
| Approach LOS         |       | F     |       |       | D     |       | C     |       | B     |      |

**Intersection Summary**

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 64 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.89  
 Intersection Signal Delay: 29.9  
 Intersection LOS: C  
 Intersection Capacity Utilization 94.1%  
 ICU Level of Service F  
 Analysis Period (min) 15

**Splits and Phases: 42: Van Dorn St & Sanger Ave/Richenbacher Ave**



**Phasings**  
42: Van Dorn St & Sanger Ave/Richenbacher Ave

Existing 2010  
AM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL  | SBT   | ø4   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|
| Protected Phases        |       | 3     | 5     |       | 3     | 5     | 2     | 1    | 6     | 4    |
| Permitted Phases        |       | 3     |       | 3     |       | 2     |       | 6    |       |      |
| Minimum Initial (s)     | 10.0  | 10.0  | 8.0   | 10.0  | 10.0  | 8.0   | 10.0  | 4.0  | 10.0  | 1.0  |
| Minimum Split (s)       | 16.0  | 16.0  | 13.0  | 16.0  | 16.0  | 13.0  | 16.0  | 9.0  | 16.0  | 30.0 |
| Total Split (s)         | 34.0  | 34.0  | 31.0  | 34.0  | 34.0  | 31.0  | 54.0  | 11.0 | 34.0  | 31.0 |
| Total Split (%)         | 26.2% | 26.2% | 23.8% | 26.2% | 26.2% | 23.8% | 41.5% | 8.5% | 26.2% | 24%  |
| Maximum Green (s)       | 28.0  | 28.0  | 26.0  | 28.0  | 28.0  | 26.0  | 48.0  | 6.0  | 28.0  | 28.0 |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0  | 4.0   | 3.0  |
| All-Red Time (s)        | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0  | 2.0   | 0.0  |
| Lead/Lag                | Lead  | Lead  | Lead  | Lead  | Lead  | Lead  | Lag   | Lead | Lag   | Lag  |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |      |       |      |
| Vehicle Extension (s)   | 4.0   | 4.0   | 2.0   | 4.0   | 4.0   | 2.0   | 0.2   | 4.0  | 0.2   | 0.2  |
| Minimum Gap (s)         | 4.0   | 4.0   | 2.0   | 4.0   | 4.0   | 2.0   | 0.2   | 4.0  | 0.2   | 0.2  |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  |
| Recall Mode             | None  | None  | None  | None  | None  | None  | C-Max | None | C-Max | None |
| Walk Time (s)           |       |       |       |       |       |       |       |      |       | 7.0  |
| Flash Dont Walk (s)     |       |       |       |       |       |       |       |      |       | 20.0 |
| Pedestrian Calls (#/hr) |       |       |       |       |       |       |       |      |       | 0    |
| 90th %ile Green (s)     | 28.0  | 28.0  | 30.4  | 28.0  | 28.0  | 30.4  | 77.5  | 7.5  | 54.6  | 0.0  |
| 90th %ile Term Code     | Max   | Max   | Gap   | Max   | Max   | Gap   | Coord | Gap  | Coord | Skip |
| 70th %ile Green (s)     | 28.0  | 28.0  | 25.3  | 28.0  | 28.0  | 25.3  | 77.8  | 7.2  | 59.7  | 0.0  |
| 70th %ile Term Code     | Max   | Max   | Gap   | Max   | Max   | Gap   | Coord | Gap  | Coord | Skip |
| 50th %ile Green (s)     | 28.0  | 28.0  | 22.0  | 28.0  | 28.0  | 22.0  | 90.0  | 0.0  | 63.0  | 0.0  |
| 50th %ile Term Code     | Max   | Max   | Gap   | Max   | Max   | Gap   | Coord | Skip | Coord | Skip |
| 30th %ile Green (s)     | 25.5  | 25.5  | 18.7  | 25.5  | 25.5  | 18.7  | 92.5  | 0.0  | 68.8  | 0.0  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Skip | Coord | Skip |
| 10th %ile Green (s)     | 19.4  | 19.4  | 14.0  | 19.4  | 19.4  | 14.0  | 98.6  | 0.0  | 79.6  | 0.0  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Skip | Coord | Skip |

**Intersection Summary**

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 64 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
43: Van Dorn St/ Van Dorn St & Braddock Rd

Existing 2010  
AM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT   | NBR   | SBL  | SBT   | SBR   |
|---------------------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|
| Lane Configurations | ↔     | ↕    | ↔     | ↔     | ↕     | ↔    | ↔     | ↕     | ↔     | ↔    | ↕     | ↔     |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12    |
| Grade (%)           | 0%    |      | 0%    |       | 0%    |      | 0%    |       | 0%    |      | 0%    |       |
| Storage Length (ft) | 40    |      | 0     | 140   |       | 0    | 0     |       | 0     | 0    |       | 0     |
| Storage Lanes       | 1     |      | 0     | 1     |       | 0    | 0     |       | 0     | 0    |       | 0     |
| Taper Length (ft)   | 50    |      |       | 50    |       |      | 50    |       |       | 50   |       |       |
| Lane Util. Factor   | 1.00  | 0.95 | 0.95  | 1.00  | 0.95  | 0.95 | 0.95  | 0.95  | 0.95  | 0.95 | 0.95  | 0.95  |
| Ped Bike Factor     | 0.99  |      | 1.00  |       | 1.00  |      | 0.99  |       | 0.99  |      | 0.99  |       |
| Frt                 | 0.944 |      | 0.982 |       | 0.967 |      | 0.950 |       | 0.950 |      | 0.950 |       |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      |       | 0.982 |       |      |       | 0.997 |
| Satd. Flow (prot)   | 1770  | 3315 | 0     | 1770  | 3466  | 0    | 0     | 3348  | 0     | 0    | 3335  | 0     |
| Flt Permitted       | 0.556 |      |       | 0.397 |       |      |       | 0.797 |       |      | 0.791 |       |
| Satd. Flow (perm)   | 1036  | 3315 | 0     | 740   | 3466  | 0    | 0     | 2718  | 0     | 0    | 2646  | 0     |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |       |       | Yes   |      |       | Yes   |
| Satd. Flow (RTOR)   | 102   |      | 12    |       | 47    |      | 32    |       | 32    |      | 32    |       |
| Link Speed (mph)    | 35    |      | 35    |       | 35    |      | 35    |       | 35    |      | 35    |       |
| Link Distance (ft)  | 1164  |      | 1277  |       | 2586  |      | 1512  |       | 1512  |      | 1512  |       |
| Travel Time (s)     | 22.7  |      | 24.9  |       | 50.4  |      | 29.5  |       | 29.5  |      | 29.5  |       |

Intersection Summary

Area Type: Other

Timings  
43: Van Dorn St/ Van Dorn St & Braddock Rd

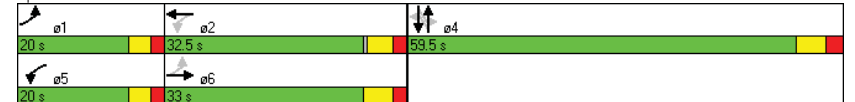
Existing 2010  
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     |
| Volume (vph)         | 10    | 220   | 105   | 265   | 580   | 660   | 5     | 55    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 1     | 6     | 5     | 2     |       | 4     |       | 4     |
| Permitted Phases     | 6     |       | 2     |       | 4     |       | 4     |       |
| Detector Phase       | 1     | 6     | 5     | 2     | 4     | 4     | 4     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 7.0   | 7.0   | 7.0   | 7.0   |
| Minimum Split (s)    | 10.0  | 29.0  | 10.0  | 28.5  | 34.5  | 34.5  | 34.5  | 34.5  |
| Total Split (s)      | 20.0  | 33.0  | 20.0  | 32.5  | 59.5  | 59.5  | 59.5  | 59.5  |
| Total Split (%)      | 17.8% | 29.3% | 17.8% | 28.9% | 52.9% | 52.9% | 52.9% | 52.9% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 3.5   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.5   | 2.5   | 2.5   | 2.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -5.0  | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.0   | 6.0   | 5.0   | 5.5   | 6.5   | 1.5   | 6.5   | 6.5   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | Max   | None  | Max   | Max   | Max   | Max   | Max   |
| Act Effct Green (s)  | 34.0  | 27.0  | 43.7  | 40.9  |       | 58.1  |       | 53.0  |
| Actuated g/C Ratio   | 0.31  | 0.25  | 0.40  | 0.38  |       | 0.54  |       | 0.49  |
| v/c Ratio            | 0.03  | 0.42  | 0.28  | 0.25  |       | 1.16  |       | 0.07  |
| Control Delay        | 19.9  | 26.4  | 22.4  | 23.5  |       | 103.8 |       | 10.6  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   |       | 0.0   |
| Total Delay          | 19.9  | 26.4  | 22.4  | 23.5  |       | 103.8 |       | 10.6  |
| LOS                  | B     | C     | C     | C     |       | F     |       | B     |
| Approach Delay       |       | 26.2  |       | 23.2  |       | 103.8 |       | 10.6  |
| Approach LOS         |       | C     |       | C     |       | F     |       | B     |

Intersection Summary

Cycle Length: 112.5  
 Actuated Cycle Length: 108.3  
 Natural Cycle: 100  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.16  
 Intersection Signal Delay: 75.6  
 Intersection LOS: E  
 Intersection Capacity Utilization 87.2%  
 ICU Level of Service E  
 Analysis Period (min) 15

Split and Phases: 43: Van Dorn St/ Van Dorn St & Braddock Rd



Phasings

43: Van Dorn St/ Van Dorn St & Braddock Rd

Existing 2010  
AM PEAK



| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 1     | 6     | 5     | 2     |       | 4     |       | 4     |
| Permitted Phases        | 6     |       | 2     |       | 4     |       | 4     |       |
| Minimum Initial (s)     | 5.0   | 10.0  | 5.0   | 10.0  | 7.0   | 7.0   | 7.0   | 7.0   |
| Minimum Split (s)       | 10.0  | 29.0  | 10.0  | 28.5  | 34.5  | 34.5  | 34.5  | 34.5  |
| Total Split (s)         | 20.0  | 33.0  | 20.0  | 32.5  | 59.5  | 59.5  | 59.5  | 59.5  |
| Total Split (%)         | 17.8% | 29.3% | 17.8% | 28.9% | 52.9% | 52.9% | 52.9% | 52.9% |
| Maximum Green (s)       | 15.0  | 27.0  | 15.0  | 27.0  | 53.0  | 53.0  | 53.0  | 53.0  |
| Yellow Time (s)         | 3.0   | 4.0   | 3.0   | 3.5   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.5   | 2.5   | 2.5   | 2.5   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 0.2   | 3.0   | 0.2   | 2.0   | 2.0   | 2.0   | 2.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | Max   | None  | Max   | Max   | Max   | Max   | Max   |
| Walk Time (s)           |       | 7.0   |       | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       | 16.0  |       | 16.0  | 21.0  | 21.0  | 21.0  | 21.0  |
| Pedestrian Calls (#/hr) |       | 0     |       | 0     | 0     | 0     | 0     | 0     |
| 90th %ile Green (s)     | 6.8   | 27.0  | 14.0  | 34.7  | 53.0  | 53.0  | 53.0  | 53.0  |
| 90th %ile Term Code     | Gap   | MaxR  | Gap   | Hold  | MaxR  | MaxR  | MaxR  | MaxR  |
| 70th %ile Green (s)     | 0.0   | 27.0  | 12.7  | 45.2  | 53.0  | 53.0  | 53.0  | 53.0  |
| 70th %ile Term Code     | Skip  | MaxR  | Gap   | Hold  | MaxR  | MaxR  | MaxR  | MaxR  |
| 50th %ile Green (s)     | 0.0   | 27.0  | 10.9  | 43.4  | 53.0  | 53.0  | 53.0  | 53.0  |
| 50th %ile Term Code     | Skip  | MaxR  | Gap   | Hold  | MaxR  | MaxR  | MaxR  | MaxR  |
| 30th %ile Green (s)     | 0.0   | 27.0  | 9.2   | 41.7  | 53.0  | 53.0  | 53.0  | 53.0  |
| 30th %ile Term Code     | Skip  | MaxR  | Gap   | Hold  | MaxR  | MaxR  | MaxR  | MaxR  |
| 10th %ile Green (s)     | 0.0   | 27.0  | 7.0   | 39.5  | 53.0  | 53.0  | 53.0  | 53.0  |
| 10th %ile Term Code     | Skip  | MaxR  | Gap   | Hold  | MaxR  | MaxR  | MaxR  | MaxR  |

Intersection Summary

|                                      |
|--------------------------------------|
| Cycle Length: 112.5                  |
| Actuated Cycle Length: 108.3         |
| Control Type: Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: 111.5      |
| 70th %ile Actuated Cycle: 110.2      |
| 50th %ile Actuated Cycle: 108.4      |
| 30th %ile Actuated Cycle: 106.7      |
| 10th %ile Actuated Cycle: 104.5      |

Lanes and Geometrics

47: Van Dorn St/Van Dorn St & Taney Ave

Existing 2010  
AM PEAK



| Lane Group          | WBL   | WBR   | NBT   | NBR  | SBL   | SBT  |
|---------------------|-------|-------|-------|------|-------|------|
| Lane Configurations | ↔     | ↔     | ↕     | ↕    | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |       | 0%    |      |       | 0%   |
| Storage Length (ft) | 0     | 85    |       | 0    | 180   |      |
| Storage Lanes       | 1     | 1     |       | 0    | 1     |      |
| Taper Length (ft)   | 50    |       |       |      | 50    |      |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95  | 0.95 | 1.00  | 0.95 |
| Ped Bike Factor     |       | 0.99  | 1.00  |      |       |      |
| Frt                 |       | 0.850 | 0.991 |      |       |      |
| Flt Protected       | 0.950 |       |       |      | 0.950 |      |
| Satd. Flow (prot)   | 1770  | 1583  | 3501  | 0    | 1770  | 3539 |
| Flt Permitted       | 0.950 |       |       |      | 0.950 |      |
| Satd. Flow (perm)   | 1770  | 1561  | 3501  | 0    | 1770  | 3539 |
| Right Turn on Red   |       | Yes   |       | Yes  |       |      |
| Satd. Flow (RTOR)   |       | 78    | 12    |      |       |      |
| Link Speed (mph)    |       | 25    | 35    |      |       | 35   |
| Link Distance (ft)  |       | 1013  | 719   |      |       | 844  |
| Travel Time (s)     |       | 27.6  | 14.0  |      |       | 16.4 |

Intersection Summary

|            |       |
|------------|-------|
| Area Type: | Other |
|------------|-------|

**Timings**  
**47: Van Dorn St/Van Dorn St & Taney Ave**

Existing 2010  
 AM PEAK

| Lane Group           | WBL   | WBR   | NBT   | SBL  | SBT   |
|----------------------|-------|-------|-------|------|-------|
| Lane Configurations  | ↔     | ↔     | ↕     | ↔    | ↕     |
| Volume (vph)         | 130   | 80    | 2210  | 35   | 450   |
| Turn Type            | NA    | Perm  | NA    | Prot | NA    |
| Protected Phases     | 2     |       | 1     | 3    | 1 3   |
| Permitted Phases     |       | 2     |       |      |       |
| Detector Phase       | 2     | 2     | 1     | 3    | 1 3   |
| Switch Phase         |       |       |       |      |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 10.0  | 4.0  |       |
| Minimum Split (s)    | 25.0  | 25.0  | 16.0  | 9.0  |       |
| Total Split (s)      | 23.0  | 23.0  | 96.0  | 11.0 | 107.0 |
| Total Split (%)      | 17.7% | 17.7% | 73.8% | 8.5% | 82.3% |
| Yellow Time (s)      | 3.0   | 3.0   | 4.0   | 3.0  |       |
| All-Red Time (s)     | 3.0   | 3.0   | 2.0   | 2.0  |       |
| Lost Time Adjust (s) | -3.0  | -3.0  | -3.0  | -2.0 | -3.0  |
| Total Lost Time (s)  | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   |
| Lead/Lag             | Lag   | Lag   | Lead  |      |       |
| Lead-Lag Optimize?   |       |       |       |      |       |
| Recall Mode          | None  | None  | C-Max | None |       |
| Act Effct Green (s)  | 16.9  | 16.9  | 95.3  | 8.8  | 107.1 |
| Actuated g/C Ratio   | 0.13  | 0.13  | 0.73  | 0.07 | 0.82  |
| v/c Ratio            | 0.61  | 0.32  | 0.98  | 0.32 | 0.17  |
| Control Delay        | 64.4  | 15.8  | 31.2  | 50.8 | 3.9   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Total Delay          | 64.4  | 15.8  | 31.2  | 50.8 | 3.9   |
| LOS                  | E     | B     | C     | D    | A     |
| Approach Delay       | 45.9  |       | 31.2  |      | 7.3   |
| Approach LOS         | D     |       | C     |      | A     |

**Intersection Summary**

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 48 (37%), Referenced to phase 1:NBSB, Start of Yellow  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.98  
 Intersection Signal Delay: 28.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 79.6%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 47: Van Dorn St/Van Dorn St & Taney Ave



**Phasings**  
**47: Van Dorn St/Van Dorn St & Taney Ave**

Existing 2010  
 AM PEAK

| Lane Group              | WBL   | WBR   | NBT   | SBL  | SBT   |
|-------------------------|-------|-------|-------|------|-------|
| Protected Phases        | 2     |       | 1     | 3    | 1 3   |
| Permitted Phases        |       | 2     |       |      |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 10.0  | 4.0  |       |
| Minimum Split (s)       | 25.0  | 25.0  | 16.0  | 9.0  |       |
| Total Split (s)         | 23.0  | 23.0  | 96.0  | 11.0 | 107.0 |
| Total Split (%)         | 17.7% | 17.7% | 73.8% | 8.5% | 82.3% |
| Maximum Green (s)       | 17.0  | 17.0  | 90.0  | 6.0  |       |
| Yellow Time (s)         | 3.0   | 3.0   | 4.0   | 3.0  |       |
| All-Red Time (s)        | 3.0   | 3.0   | 2.0   | 2.0  |       |
| Lead/Lag                | Lag   | Lag   | Lead  |      |       |
| Lead-Lag Optimize?      |       |       |       |      |       |
| Vehicle Extension (s)   | 2.0   | 2.0   | 0.2   | 2.0  |       |
| Minimum Gap (s)         | 2.0   | 2.0   | 0.2   | 2.0  |       |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0  |       |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0  |       |
| Recall Mode             | None  | None  | C-Max | None |       |
| Walk Time (s)           | 4.0   | 4.0   |       |      |       |
| Flash Dont Walk (s)     | 15.0  | 15.0  |       |      |       |
| Pedestrian Calls (#/hr) | 0     | 0     |       |      |       |
| 90th %ile Green (s)     | 17.0  | 17.0  | 90.0  | 6.0  |       |
| 90th %ile Term Code     | Max   | Max   | Coord | Max  |       |
| 70th %ile Green (s)     | 17.0  | 17.0  | 90.0  | 6.0  |       |
| 70th %ile Term Code     | Max   | Max   | Coord | Max  |       |
| 50th %ile Green (s)     | 14.6  | 14.6  | 90.2  | 8.2  |       |
| 50th %ile Term Code     | Gap   | Gap   | Coord | Gap  |       |
| 30th %ile Green (s)     | 12.2  | 12.2  | 93.5  | 7.3  |       |
| 30th %ile Term Code     | Gap   | Gap   | Coord | Gap  |       |
| 10th %ile Green (s)     | 8.8   | 8.8   | 97.9  | 6.3  |       |
| 10th %ile Term Code     | Gap   | Gap   | Coord | Gap  |       |

**Intersection Summary**

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 48 (37%), Referenced to phase 1:NBSB, Start of Yellow  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
51: Beauregard St & Sanger Ave

Existing 2010  
AM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL  | WBT   | WBR  | NBL   | NBT  | NBR  | SBL  | SBT   | SBR  |
|---------------------|-------|------|------|------|-------|------|-------|------|------|------|-------|------|
| Lane Configurations |       | ↔    |      |      | ↔     | ↔    | ↔     | ↔    |      | ↔    | ↔     |      |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900 | 1900  | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12   | 12    | 12   | 12    | 12   | 12   | 12   | 12    | 12   |
| Grade (%)           | 0%    |      |      |      | 0%    |      | 0%    |      |      |      | 0%    |      |
| Storage Length (ft) | 0     |      | 0    | 0    |       | 0    | 175   |      | 0    | 175  |       | 0    |
| Storage Lanes       | 0     |      | 0    | 0    |       | 1    | 1     |      | 0    | 1    |       | 0    |
| Taper Length (ft)   | 50    |      |      | 50   |       |      | 50    |      |      | 50   |       |      |
| Lane Util. Factor   | 0.95  | 0.95 | 0.95 | 1.00 | 1.00  | 1.00 | 1.00  | 0.95 | 0.95 | 1.00 | 0.95  | 0.95 |
| Ped Bike Factor     | 0.93  |      |      |      | 0.81  |      | 1.00  |      |      |      | 0.99  |      |
| Frt                 | 0.956 |      |      |      | 0.850 |      | 0.984 |      |      |      | 0.961 |      |
| Flt Protected       | 0.982 |      |      |      | 0.971 |      | 0.950 |      |      |      | 0.950 |      |
| Satd. Flow (prot)   | 0     | 3088 | 0    | 0    | 1809  | 1583 | 1770  | 3476 | 0    | 1770 | 3355  | 0    |
| Flt Permitted       | 0.574 |      |      |      | 0.971 |      | 0.504 |      |      |      | 0.053 |      |
| Satd. Flow (perm)   | 0     | 1805 | 0    | 0    | 1809  | 1286 | 939   | 3476 | 0    | 99   | 3355  | 0    |
| Right Turn on Red   |       |      | Yes  |      |       |      | Yes   |      | Yes  |      |       |      |
| Satd. Flow (RTOR)   | 30    |      |      |      | 317   |      | 9     |      |      |      | 34    |      |
| Link Speed (mph)    | 25    |      |      |      | 25    |      | 35    |      |      |      | 35    |      |
| Link Distance (ft)  | 941   |      |      |      | 2026  |      | 947   |      |      |      | 1932  |      |
| Travel Time (s)     | 25.7  |      |      |      | 55.3  |      | 18.4  |      |      |      | 37.6  |      |

Intersection Summary

Area Type: Other

Timings  
51: Beauregard St & Sanger Ave

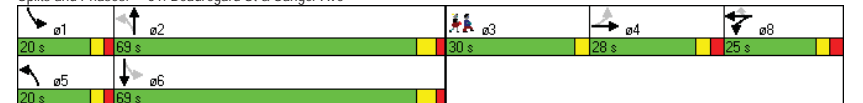
Existing 2010  
AM PEAK

| Lane Group           | EBL    | EBT   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   | ø3   |
|----------------------|--------|-------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations  |        | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |      |
| Volume (vph)         | 105    | 100   | 65    | 295   | 90    | 1080  | 100   | 225   |      |
| Turn Type            | Perm   | NA    | NA    | Perm  | pm+pt | NA    | pm+pt | NA    |      |
| Protected Phases     |        | 4     | 8     |       | 5     | 2     | 1     | 6     | 3    |
| Permitted Phases     |        | 4     |       | 8     | 2     |       | 6     |       |      |
| Detector Phase       | 4      | 4     | 8     | 8     | 5     | 2     | 1     | 6     |      |
| Switch Phase         |        |       |       |       |       |       |       |       |      |
| Minimum Initial (s)  | 4.0    | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0  |
| Minimum Split (s)    | 20.0   | 20.0  | 20.0  | 20.0  | 9.0   | 20.0  | 11.0  | 20.0  | 29.0 |
| Total Split (s)      | 28.0   | 28.0  | 25.0  | 25.0  | 20.0  | 69.0  | 20.0  | 69.0  | 30.0 |
| Total Split (%)      | 16.3%  | 16.3% | 14.5% | 14.5% | 11.6% | 40.1% | 11.6% | 40.1% | 17%  |
| Yellow Time (s)      | 3.0    | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   | 3.0  |
| All-Red Time (s)     | 3.0    | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.0  |
| Lost Time Adjust (s) | 0.0    | 0.0   | 0.0   | 0.0   | -5.0  | -5.0  | 0.0   | -5.0  |      |
| Total Lost Time (s)  | 6.0    | 6.0   | 6.0   | 6.0   | 0.0   | 1.0   | 5.0   | 1.0   |      |
| Lead/Lag             | Lag    | Lag   |       |       | Lead  | Lag   | Lead  | Lag   | Lead |
| Lead-Lag Optimize?   | Yes    | Yes   |       |       | Yes   | Yes   | Yes   | Yes   | Yes  |
| Recall Mode          | None   | None  | None  | None  | None  | C-Max | None  | C-Max | None |
| Act Effct Green (s)  | 40.3   | 23.6  | 23.6  | 94.5  | 78.6  | 87.8  | 80.2  |       |      |
| Actuated g/C Ratio   | 0.23   | 0.14  | 0.14  | 0.55  | 0.46  | 0.51  | 0.47  |       |      |
| v/c Ratio            | 1.79dl | 0.69  | 0.70  | 0.16  | 0.82  | 0.66  | 0.21  |       |      |
| Control Delay        | 64.5   | 84.8  | 14.9  | 19.1  | 45.8  | 53.2  | 25.3  |       |      |
| Queue Delay          | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |      |
| Total Delay          | 64.5   | 84.8  | 14.9  | 19.1  | 45.8  | 53.2  | 25.3  |       |      |
| LOS                  | E      | F     | B     | B     | D     | D     | C     |       |      |
| Approach Delay       | 64.5   | 39.5  |       |       | 43.9  |       | 32.2  |       |      |
| Approach LOS         | E      | D     |       |       | D     |       | C     |       |      |

Intersection Summary

Cycle Length: 172  
 Actuated Cycle Length: 172  
 Offset: 23 (13%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 130  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay: 43.6  
 Intersection LOS: D  
 Intersection Capacity Utilization 80.7%  
 ICU Level of Service D  
 Analysis Period (min) 15  
 dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 51: Beauregard St & Sanger Ave



Phasings  
51: Beauregard St & Sanger Ave

Existing 2010  
AM PEAK

| Lane Group              | EBL   | EBT   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   | ø3   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Protected Phases        |       | 4     | 8     |       | 5     | 2     | 1     | 6     | 3    |
| Permitted Phases        | 4     |       |       | 8     | 2     |       | 6     |       |      |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0  |
| Minimum Split (s)       | 20.0  | 20.0  | 20.0  | 20.0  | 9.0   | 20.0  | 11.0  | 20.0  | 29.0 |
| Total Split (s)         | 28.0  | 28.0  | 25.0  | 25.0  | 20.0  | 69.0  | 20.0  | 69.0  | 30.0 |
| Total Split (%)         | 16.3% | 16.3% | 14.5% | 14.5% | 11.6% | 40.1% | 11.6% | 40.1% | 17%  |
| Maximum Green (s)       | 22.0  | 22.0  | 19.0  | 19.0  | 15.0  | 63.0  | 15.0  | 63.0  | 27.0 |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   | 3.0  |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.0  |
| Lead/Lag                | Lag   | Lag   |       |       | Lead  | Lag   | Lead  | Lag   | Lead |
| Lead-Lag Optimize?      | Yes   | Yes   |       |       | Yes   | Yes   | Yes   | Yes   | Yes  |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   | 3.0  |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Recall Mode             | None  | None  | None  | None  | None  | C-Max | None  | C-Max | None |
| Walk Time (s)           |       |       |       |       |       |       |       |       | 8.0  |
| Flash Dont Walk (s)     |       |       |       |       |       |       |       |       | 18.0 |
| Pedestrian Calls (#/hr) |       |       |       |       |       |       |       |       | 0    |
| 90th %ile Green (s)     | 39.2  | 39.2  | 31.2  | 31.2  | 13.4  | 63.0  | 15.6  | 65.2  | 0.0  |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Max   | Coord | Skip |
| 70th %ile Green (s)     | 37.5  | 37.5  | 26.4  | 26.4  | 11.0  | 71.2  | 13.9  | 74.1  | 0.0  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Gap   | Coord | Skip |
| 50th %ile Green (s)     | 37.7  | 37.7  | 24.0  | 24.0  | 9.7   | 75.8  | 11.5  | 77.6  | 0.0  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Gap   | Coord | Skip |
| 30th %ile Green (s)     | 39.7  | 39.7  | 20.3  | 20.3  | 8.5   | 79.8  | 9.2   | 80.5  | 0.0  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Gap   | Coord | Skip |
| 10th %ile Green (s)     | 47.2  | 47.2  | 16.0  | 16.0  | 7.1   | 78.2  | 7.6   | 78.7  | 0.0  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Gap   | Coord | Skip |

Intersection Summary

Cycle Length: 172  
 Actuated Cycle Length: 172  
 Offset: 23 (13%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
52: Beauregard St & Rayburn Ave

Existing 2010  
AM PEAK

| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT   | WBR   | NBL   | NBT   | NBR  | SBL   | SBT  | SBR   |
|---------------------|------|-------|-------|------|-------|-------|-------|-------|------|-------|------|-------|
| Lane Configurations |      | ↔     | ↔     |      | ↔     | ↔     | ↔     | ↔     | ↔    | ↔     | ↔    | ↔     |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12    | 12   | 12    | 12   | 12    |
| Grade (%)           |      | 0%    |       |      | 0%    |       |       | 0%    |      |       | 0%   |       |
| Storage Length (ft) | 0    |       | 0     | 0    |       | 0     | 190   |       | 0    | 175   |      | 0     |
| Storage Lanes       | 0    |       | 1     | 0    |       | 1     | 1     |       | 0    | 1     |      | 0     |
| Taper Length (ft)   | 50   |       |       | 50   |       |       | 50    |       |      | 50    |      |       |
| 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     |      |       | 0.95  |      |       | 0.96  |       | 1.00  |      |       |      | 0.99  |
| Frt                 |      |       | 0.850 |      |       | 0.850 |       | 0.996 |      |       |      | 0.942 |
| Flt Protected       |      | 0.955 |       |      | 0.967 |       | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (prot)   | 0    | 1779  | 1583  | 0    | 1801  | 1583  | 1770  | 3515  | 0    | 1770  | 3304 | 0     |
| Flt Permitted       |      | 0.727 |       |      | 0.774 |       | 0.415 |       |      | 0.099 |      |       |
| Satd. Flow (perm)   | 0    | 1354  | 1501  | 0    | 1442  | 1526  | 773   | 3515  | 0    | 184   | 3304 | 0     |
| Right Turn on Red   |      |       | Yes   |      |       | Yes   |       |       | Yes  |       |      | Yes   |
| Satd. Flow (RTOR)   |      |       | 48    |      |       | 27    |       | 4     |      |       | 182  |       |
| Link Speed (mph)    |      | 25    |       |      | 25    |       |       | 35    |      |       | 35   |       |
| Link Distance (ft)  |      | 932   |       |      | 601   |       |       | 749   |      |       | 719  |       |
| Travel Time (s)     |      | 25.4  |       |      | 16.4  |       |       | 14.6  |      |       | 14.0 |       |

Intersection Summary

Area Type: Other

Timings  
52: Beauregard St & Rayburn Ave

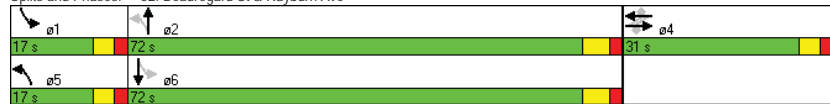
Existing 2010  
AM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       | ↕     | ↕     |       | ↕     | ↕     | ↕     | ↕     | ↕     | ↕     |
| Volume (vph)         | 230   | 15    | 45    | 10    | 5     | 25    | 95    | 1455  | 10    | 295   |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | Perm  | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     |       | 4     |       |       | 4     |       | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 4     | 4     |       | 4     | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 9.0   | 22.0  | 9.0   | 22.0  |
| Total Split (s)      | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 17.0  | 72.0  | 17.0  | 72.0  |
| Total Split (%)      | 25.8% | 25.8% | 25.8% | 25.8% | 25.8% | 25.8% | 14.2% | 60.0% | 14.2% | 60.0% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max | None  |
| Act Effct Green (s)  | 24.8  | 24.8  |       | 24.8  | 24.8  |       | 84.3  | 81.4  | 77.8  | 71.0  |
| Actuated g/C Ratio   | 0.21  | 0.21  |       | 0.21  | 0.21  |       | 0.70  | 0.68  | 0.65  | 0.59  |
| v/c Ratio            | 0.94  | 0.14  |       | 0.05  | 0.08  |       | 0.17  | 0.68  | 0.06  | 0.25  |
| Control Delay        | 87.3  | 11.8  |       | 38.4  | 13.9  |       | 4.6   | 7.9   | 7.9   | 8.3   |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 87.3  | 11.8  |       | 38.4  | 13.9  |       | 4.6   | 7.9   | 7.9   | 8.3   |
| LOS                  | F     | B     |       | D     | B     |       | A     | A     | A     | A     |
| Approach Delay       | 75.6  |       |       | 23.0  |       |       | 7.7   |       | 8.3   |       |
| Approach LOS         | E     |       |       | C     |       |       | A     |       | A     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 34 (28%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.94  
 Intersection Signal Delay: 16.2  
 Intersection LOS: B  
 Intersection Capacity Utilization 83.4%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 52: Beauregard St & Rayburn Ave



Phasings  
52: Beauregard St & Rayburn Ave

Existing 2010  
AM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 4     |       |       | 4     |       | 5     | 2     | 1     | 6     |
| Permitted Phases        | 4     |       | 4     | 4     |       | 4     |       |       | 6     |       |
| Minimum Initial (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)       | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 9.0   | 22.0  | 9.0   | 22.0  |
| Total Split (s)         | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 17.0  | 72.0  | 17.0  | 72.0  |
| Total Split (%)         | 25.8% | 25.8% | 25.8% | 25.8% | 25.8% | 25.8% | 14.2% | 60.0% | 14.2% | 60.0% |
| Maximum Green (s)       | 25.5  | 25.5  | 25.5  | 25.5  | 25.5  | 25.5  | 12.0  | 66.0  | 12.0  | 66.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 0.2   | 3.0   | 0.2   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 0.2   | 3.0   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max | None  |
| Walk Time (s)           | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |       | 4.0   |       |
| Flash Dont Walk (s)     | 18.0  | 18.0  | 18.0  | 18.0  | 18.0  | 18.0  |       | 12.0  |       | 12.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     | 0     |       | 0     |       | 0     |
| 90th %ile Green (s)     | 25.5  | 25.5  | 25.5  | 25.5  | 25.5  | 25.5  | 9.3   | 71.8  | 6.2   | 68.7  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Gap   | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 25.5  | 25.5  | 25.5  | 25.5  | 25.5  | 25.5  | 8.3   | 83.0  | 0.0   | 69.7  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Gap   | Coord | Skip  | Coord |
| 50th %ile Green (s)     | 25.5  | 25.5  | 25.5  | 25.5  | 25.5  | 25.5  | 7.7   | 83.0  | 0.0   | 70.3  |
| 50th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Gap   | Coord | Skip  | Coord |
| 30th %ile Green (s)     | 25.5  | 25.5  | 25.5  | 25.5  | 25.5  | 25.5  | 7.0   | 83.0  | 0.0   | 71.0  |
| 30th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Gap   | Coord | Skip  | Coord |
| 10th %ile Green (s)     | 22.2  | 22.2  | 22.2  | 22.2  | 22.2  | 22.2  | 6.0   | 86.3  | 0.0   | 75.3  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Skip  | Coord |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 34 (28%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
53: Beauregard St & Reading Ave

Existing 2010  
AM PEAK

| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT   | WBR   | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|
| Lane Configurations |      | ↔     | ↔     |      | ↔     | ↔     | ↔     | ↔    | ↔     | ↔     | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           |      | 0%    |       |      | 0%    |       |       | 0%   |       |       | 0%    |      |
| Storage Length (ft) | 0    |       | 0     | 0    |       | 0     | 150   |      | 125   | 170   |       | 0    |
| Storage Lanes       | 0    |       | 1     | 0    |       | 1     |       |      | 1     | 1     |       | 0    |
| Taper Length (ft)   | 50   |       |       | 50   |       |       | 50    |      |       | 50    |       |      |
| Lane Util. Factor   | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 0.95 |
| Ped Bike Factor     |      |       | 0.98  |      |       | 0.98  |       |      |       |       | 0.99  |      |
| Frt                 |      |       | 0.850 |      |       | 0.850 |       |      | 0.850 |       | 0.991 |      |
| Flt Protected       |      | 0.953 |       |      | 0.964 |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (prot)   | 0    | 1775  | 1583  | 0    | 1796  | 1583  | 1770  | 3539 | 1583  | 1770  | 3489  | 0    |
| Flt Permitted       |      | 0.699 |       |      | 0.590 |       | 0.508 |      |       | 0.133 |       |      |
| Satd. Flow (perm)   | 0    | 1302  | 1544  | 0    | 1099  | 1549  | 946   | 3539 | 1583  | 248   | 3489  | 0    |
| Right Turn on Red   |      | Yes   |       |      | Yes   |       | Yes   |      | Yes   |       | Yes   |      |
| Satd. Flow (RTOR)   |      |       | 75    |      |       | 75    |       |      | 3     |       | 9     |      |
| Link Speed (mph)    |      | 25    |       |      | 25    |       |       | 35   |       |       | 35    |      |
| Link Distance (ft)  |      | 1147  |       |      | 584   |       |       | 1932 |       |       | 749   |      |
| Travel Time (s)     |      | 31.3  |       |      | 15.9  |       |       | 37.6 |       |       | 14.6  |      |

Intersection Summary

Area Type: Other

Timings  
53: Beauregard St & Reading Ave

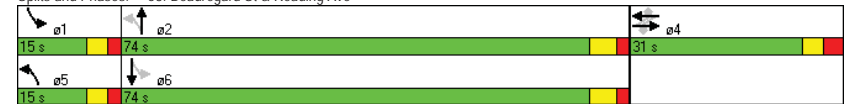
Existing 2010  
AM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR    | SBL   | SBT   | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-----|
| Lane Configurations  |       | ↔     | ↔     |       | ↔     | ↔     | ↔     | ↔     | ↔      | ↔     | ↔     | ↔   |
| Volume (vph)         | 195   | 5     | 70    | 30    | 10    | 70    | 140   | 1330  | 10     | 25    | 305   |     |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | Perm  | pm+pt | NA    | NA     | pm+pt | NA    |     |
| Protected Phases     |       | 4     |       |       | 4     |       | 5     | 2     |        | 1     | 6     |     |
| Permitted Phases     | 4     |       | 4     | 4     |       | 4     | 2     |       |        | 6     |       |     |
| Detector Phase       | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 2     |        | 1     | 6     |     |
| Switch Phase         |       |       |       |       |       |       |       |       |        |       |       |     |
| Minimum Initial (s)  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 6.0   | 10.0  |        | 6.0   | 10.0  |     |
| Minimum Split (s)    | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 11.0  | 24.0  |        | 11.0  | 24.0  |     |
| Total Split (s)      | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 15.0  | 74.0  | 0.0    | 15.0  | 74.0  |     |
| Total Split (%)      | 25.8% | 25.8% | 25.8% | 25.8% | 25.8% | 25.8% | 12.5% | 61.7% | 0.0%   | 12.5% | 61.7% |     |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   |        | 3.0   | 4.0   |     |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   |        | 2.0   | 2.0   |     |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0    | 0.0   | 0.0   |     |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 6.0   | 4.0    | 5.0   | 6.0   |     |
| Lead/Lag             |       |       |       |       |       |       | Lead  | Lag   |        | Lead  | Lag   |     |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |        |       |       |     |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None  | C-Max |        | None  | C-Max |     |
| Act Effct Green (s)  |       | 22.8  | 22.8  |       | 22.8  | 22.8  | 85.1  | 78.4  | 0.0    | 78.9  | 71.7  |     |
| Actuated g/C Ratio   |       | 0.19  | 0.19  |       | 0.19  | 0.19  | 0.71  | 0.65  | 0.00   | 0.66  | 0.60  |     |
| v/c Ratio            |       | 0.87  | 0.21  |       | 0.21  | 0.21  | 0.21  | 0.62  | 3.67   | 0.11  | 0.17  |     |
| Control Delay        |       | 79.0  | 10.3  |       | 42.4  | 10.3  | 6.3   | 15.0  | 1775.8 | 9.0   | 12.7  |     |
| Queue Delay          |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0    | 0.0   | 0.0   |     |
| Total Delay          |       | 79.0  | 10.3  |       | 42.4  | 10.3  | 6.3   | 15.0  | 1775.8 | 9.0   | 12.7  |     |
| LOS                  |       | E     | B     |       | D     | B     | A     | B     | F      | A     | B     |     |
| Approach Delay       |       | 61.2  |       |       | 22.0  |       |       | 26.3  |        |       | 12.4  |     |
| Approach LOS         |       | E     |       |       | C     |       |       | C     |        |       | B     |     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 35 (29%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 3.67  
 Intersection Signal Delay: 28.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 75.0%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 53: Beauregard St & Reading Ave





Phasings  
53: Beauregard St & Reading Ave

Existing 2010  
AM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR  | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| Protected Phases        |       | 4     |       |       | 4     |       | 5     | 2     |      | 1     | 6     |
| Permitted Phases        | 4     |       | 4     | 4     |       | 4     |       | 2     |      | 6     |       |
| Minimum Initial (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 6.0   | 10.0  |      | 6.0   | 10.0  |
| Minimum Split (s)       | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 11.0  | 24.0  |      | 11.0  | 24.0  |
| Total Split (s)         | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 15.0  | 74.0  | 0.0  | 15.0  | 74.0  |
| Total Split (%)         | 25.8% | 25.8% | 25.8% | 25.8% | 25.8% | 25.8% | 12.5% | 61.7% | 0.0% | 12.5% | 61.7% |
| Maximum Green (s)       | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 10.0  | 68.0  |      | 10.0  | 68.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   |      | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   |      | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       |       |       | Lead  | Lag   |      | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |      |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |      | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |      | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None  | C-Max |      | None  | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |       | 7.0   |      |       | 7.0   |
| Flash Dont Walk (s)     | 18.0  | 18.0  | 18.0  | 18.0  | 18.0  | 18.0  |       | 8.0   |      |       | 8.0   |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     | 0     |       | 0     |      |       | 0     |
| 90th %ile Green (s)     | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 10.0  | 71.2  |      | 6.8   | 68.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Max   | Coord |      | Gap   | Coord |
| 70th %ile Green (s)     | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 9.7   | 71.7  |      | 6.3   | 68.3  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Gap   | Coord |      | Gap   | Coord |
| 50th %ile Green (s)     | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 8.8   | 72.0  |      | 6.0   | 69.2  |
| 50th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Gap   | Coord |      | Min   | Coord |
| 30th %ile Green (s)     | 22.2  | 22.2  | 22.2  | 22.2  | 22.2  | 22.2  | 7.8   | 85.8  |      | 0.0   | 73.0  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Skip  |      | Coord |       |
| 10th %ile Green (s)     | 16.7  | 16.7  | 16.7  | 16.7  | 16.7  | 16.7  | 6.5   | 91.3  |      | 0.0   | 79.8  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Skip  |      | Coord |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 35 (29%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
54: Beauregard St & N Morgan St

Existing 2010  
AM PEAK

| Lane Group          | EBL   | EBT   | EBR  | WBL  | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|---------------------|-------|-------|------|------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations |       |       |      |      |       |      |       |       |      |       |       |      |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12   | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           |       | 0%    |      |      | 0%    |      |       | 0%    |      |       | 0%    |      |
| Storage Length (ft) | 0     |       | 175  | 0    |       | 0    | 115   |       | 0    | 115   |       | 0    |
| Storage Lanes       | 1     |       | 1    | 0    |       | 0    | 1     |       | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50    |       |      | 50   |       |      | 50    |       |      | 50    |       |      |
| 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     |       | 0.96  |      |      | 0.99  |      |       | 1.00  |      |       | 0.99  |      |
| Frt                 |       | 0.850 |      |      | 0.906 |      |       | 0.998 |      |       | 0.982 |      |
| Flt Protected       | 0.950 |       |      |      | 0.985 |      | 0.950 |       |      | 0.950 |       |      |
| Satd. Flow (prot)   | 1770  | 1521  | 0    | 0    | 1640  | 0    | 1770  | 3529  | 0    | 1770  | 3453  | 0    |
| Flt Permitted       | 0.701 |       |      |      | 0.904 |      | 0.384 |       |      | 0.248 |       |      |
| Satd. Flow (perm)   | 1306  | 1521  | 0    | 0    | 1505  | 0    | 715   | 3529  | 0    | 462   | 3453  | 0    |
| Right Turn on Red   |       |       | Yes  |      |       | Yes  |       |       | Yes  |       |       | Yes  |
| Satd. Flow (RTOR)   |       | 562   |      |      | 86    |      |       | 1     |      |       | 12    |      |
| Link Speed (mph)    |       | 25    |      |      | 25    |      |       | 35    |      |       | 35    |      |
| Link Distance (ft)  |       | 775   |      |      | 737   |      |       | 1064  |      |       | 947   |      |
| Travel Time (s)     |       | 21.1  |      |      | 20.1  |      |       | 20.7  |      |       | 18.4  |      |

Intersection Summary

Area Type: Other

Timings  
54: Beauregard St & N Morgan St

Existing 2010  
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Volume (vph)         | 170   | 0     | 35    | 0     | 5     | 1050  | 30    | 330   |
| 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)  | 8.0   | 8.0   | 8.0   | 8.0   | 4.0   | 15.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 27.0  | 27.0  | 27.0  | 27.0  | 9.0   | 21.0  | 9.0   | 21.0  |
| Total Split (s)      | 50.0  | 50.0  | 50.0  | 50.0  | 30.0  | 50.0  | 30.0  | 50.0  |
| Total Split (%)      | 38.5% | 38.5% | 38.5% | 38.5% | 23.1% | 38.5% | 23.1% | 38.5% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | Max   | Max   | None  | None  |
| Act Effct Green (s)  | 17.1  | 17.1  |       | 17.1  | 51.5  | 44.8  | 26.2  | 20.0  |
| Actuated g/C Ratio   | 0.21  | 0.21  |       | 0.21  | 0.65  | 0.56  | 0.33  | 0.25  |
| v/c Ratio            | 0.66  | 0.01  |       | 0.32  | 0.01  | 0.58  | 0.14  | 0.46  |
| Control Delay        | 41.0  | 0.0   |       | 12.9  | 6.6   | 15.0  | 11.5  | 26.8  |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 41.0  | 0.0   |       | 12.9  | 6.6   | 15.0  | 11.5  | 26.8  |
| LOS                  | D     | A     |       | B     | A     | B     | B     | C     |
| Approach Delay       |       | 38.7  |       | 12.9  |       | 14.9  |       | 25.7  |
| Approach LOS         |       | D     |       | B     |       | B     |       | C     |

| Intersection Summary               |                        |
|------------------------------------|------------------------|
| Cycle Length:                      | 130                    |
| Actuated Cycle Length:             | 79.8                   |
| Natural Cycle:                     | 65                     |
| Control Type:                      | Actuated-Uncoordinated |
| Maximum v/c Ratio:                 | 0.66                   |
| Intersection Signal Delay:         | 19.7                   |
| Intersection LOS:                  | B                      |
| Intersection Capacity Utilization: | 56.2%                  |
| ICU Level of Service:              | B                      |
| Analysis Period (min):             | 15                     |



Phasings  
54: Beauregard St & N Morgan St

Existing 2010  
AM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 4     |       | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases        | 4     |       | 4     |       | 2     |       | 6     |       |
| Minimum Initial (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 4.0   | 15.0  | 4.0   | 10.0  |
| Minimum Split (s)       | 27.0  | 27.0  | 27.0  | 27.0  | 9.0   | 21.0  | 9.0   | 21.0  |
| Total Split (s)         | 50.0  | 50.0  | 50.0  | 50.0  | 30.0  | 50.0  | 30.0  | 50.0  |
| Total Split (%)         | 38.5% | 38.5% | 38.5% | 38.5% | 23.1% | 38.5% | 23.1% | 38.5% |
| Maximum Green (s)       | 44.0  | 44.0  | 44.0  | 44.0  | 25.0  | 44.0  | 25.0  | 44.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| 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   | 4.0   | 2.0   | 4.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | Max   | Max   | None  | None  |
| Walk Time (s)           | 4.0   | 4.0   | 4.0   | 4.0   |       | 7.0   |       | 7.0   |
| Flash Dont Walk (s)     | 17.0  | 17.0  | 17.0  | 17.0  |       | 8.0   |       | 8.0   |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     |       | 0     |       | 0     |
| 90th %ile Green (s)     | 26.2  | 26.2  | 26.2  | 26.2  | 25.0  | 44.0  | 6.2   | 25.2  |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | MaxR  | MaxR  | Gap   | Hold  |
| 70th %ile Green (s)     | 20.3  | 20.3  | 20.3  | 20.3  | 25.0  | 44.0  | 5.4   | 24.4  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | MaxR  | MaxR  | Gap   | Hold  |
| 50th %ile Green (s)     | 17.3  | 17.3  | 17.3  | 17.3  | 25.0  | 44.0  | 5.0   | 24.0  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | MaxR  | MaxR  | Gap   | Hold  |
| 30th %ile Green (s)     | 13.5  | 13.5  | 13.5  | 13.5  | 25.0  | 44.0  | 0.0   | 14.0  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | MaxR  | MaxR  | Skip  | Hold  |
| 10th %ile Green (s)     | 10.1  | 10.1  | 10.1  | 10.1  | 25.0  | 44.0  | 0.0   | 14.0  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | MaxR  | MaxR  | Skip  | Hold  |

| Intersection Summary      |                        |
|---------------------------|------------------------|
| Cycle Length:             | 130                    |
| Actuated Cycle Length:    | 79.8                   |
| Control Type:             | Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: | 93.4                   |
| 70th %ile Actuated Cycle: | 86.7                   |
| 50th %ile Actuated Cycle: | 83.3                   |
| 30th %ile Actuated Cycle: | 69.5                   |
| 10th %ile Actuated Cycle: | 66.1                   |

Lanes and Geometrics  
55: Beauregard St & N Armistead St

Existing 2010  
AM PEAK

| Lane Group          | EBL  | EBT   | EBR   | WBL   | WBT  | WBR   | NBL  | NBT   | NBR  | SBL   | SBT   | SBR  |
|---------------------|------|-------|-------|-------|------|-------|------|-------|------|-------|-------|------|
| Lane Configurations |      | ↔     | ↔     |       | ↔    | ↔     | ↔    | ↔     |      | ↔     | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12    | 12    | 12   | 12    | 12   | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           |      | 0%    |       |       | 0%   |       |      | 0%    |      |       | 0%    |      |
| Storage Length (ft) | 0    |       | 50    | 0     |      | 50    | 90   |       | 0    | 80    |       | 0    |
| Storage Lanes       | 0    |       | 1     | 0     |      | 1     |      |       | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50   |       |       | 50    |      |       | 50   |       |      | 50    |       |      |
| Lane Util. Factor   | 1.00 | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 | 0.95  | 0.95 | 0.91  | 0.91  | 0.95 |
| Ped Bike Factor     |      |       |       |       |      |       |      | 0.98  | 1.00 |       |       | 1.00 |
| Frt                 |      |       | 0.850 |       |      | 0.850 |      | 0.997 |      |       | 0.998 |      |
| Flt Protected       |      | 0.950 |       | 0.950 |      | 0.950 |      | 0.950 |      | 0.950 | 0.999 |      |
| Satd. Flow (prot)   | 0    | 1770  | 1583  | 0     | 1770 | 1583  | 1770 | 3526  | 0    | 1610  | 3379  | 0    |
| Flt Permitted       |      | 0.708 |       | 0.736 |      | 0.537 |      | 0.227 |      | 0.942 |       |      |
| Satd. Flow (perm)   | 0    | 1319  | 1583  | 0     | 1371 | 1557  | 1000 | 3526  | 0    | 385   | 3186  | 0    |
| Right Turn on Red   |      | Yes   |       | Yes   |      | Yes   |      | Yes   |      | Yes   |       | Yes  |
| Satd. Flow (RTOR)   |      |       | 11    |       |      | 242   |      | 3     |      |       | 3     |      |
| Link Speed (mph)    |      | 25    |       | 25    |      | 35    |      | 35    |      | 35    |       | 35   |
| Link Distance (ft)  |      | 620   |       | 778   |      | 935   |      | 1064  |      |       |       | 1064 |
| Travel Time (s)     |      | 16.9  |       | 21.2  |      | 18.2  |      | 20.7  |      |       |       | 20.7 |

Intersection Summary

Area Type: Other

Timings  
55: Beauregard St & N Armistead St

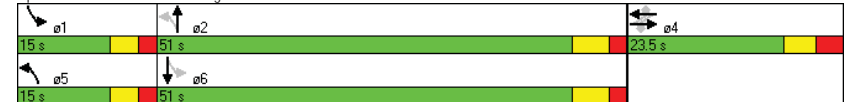
Existing 2010  
AM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       | ↔     | ↔     |       | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 30    | 0     | 10    | 70    | 0     | 225   | 5     | 815   | 60    | 310   |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | Perm  | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     |       | 4     |       | 4     |       | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 4     | 4     |       | 4     | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 5.0   | 12.0  | 5.0   | 12.0  |
| Minimum Split (s)    | 13.5  | 13.5  | 13.5  | 13.5  | 13.5  | 13.5  | 10.0  | 22.0  | 10.0  | 22.0  |
| Total Split (s)      | 23.5  | 23.5  | 23.5  | 23.5  | 23.5  | 23.5  | 15.0  | 51.0  | 15.0  | 51.0  |
| Total Split (%)      | 26.3% | 26.3% | 26.3% | 26.3% | 26.3% | 26.3% | 16.8% | 57.0% | 16.8% | 57.0% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 9.7   | 9.7   |       | 9.7   | 9.7   | 25.1  | 21.2  | 27.8  | 26.5  |       |
| Actuated g/C Ratio   | 0.19  | 0.19  |       | 0.19  | 0.19  | 0.50  | 0.42  | 0.55  | 0.52  |       |
| v/c Ratio            | 0.13  | 0.04  |       | 0.28  | 0.49  | 0.01  | 0.60  | 0.15  | 0.20  |       |
| Control Delay        | 22.9  | 12.7  |       | 24.7  | 7.7   | 4.8   | 14.3  | 5.6   | 5.7   |       |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Total Delay          | 22.9  | 12.7  |       | 24.7  | 7.7   | 4.8   | 14.3  | 5.6   | 5.7   |       |
| LOS                  | C     | B     |       | C     | A     | A     | B     | A     | A     |       |
| Approach Delay       | 20.3  |       |       | 11.7  |       |       | 14.2  |       | 5.7   |       |
| Approach LOS         | C     |       |       | B     |       |       | B     |       | A     |       |

Intersection Summary

Cycle Length: 89.5  
 Actuated Cycle Length: 50.5  
 Natural Cycle: 50  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.60  
 Intersection Signal Delay: 11.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 60.8%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 55: Beauregard St & N Armistead St



Phasings  
55: Beauregard St & N Armistead St

Existing 2010  
AM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| Protected Phases        |       |       | 4     |       |       | 4     |       | 5     | 2     | 1     | 6 |
| Permitted Phases        | 4     |       |       | 4     |       | 4     |       | 2     |       | 6     |   |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 5.0   | 12.0  | 5.0   | 12.0  |   |
| Minimum Split (s)       | 13.5  | 13.5  | 13.5  | 13.5  | 13.5  | 13.5  | 10.0  | 22.0  | 10.0  | 22.0  |   |
| Total Split (s)         | 23.5  | 23.5  | 23.5  | 23.5  | 23.5  | 23.5  | 15.0  | 51.0  | 15.0  | 51.0  |   |
| Total Split (%)         | 26.3% | 26.3% | 26.3% | 26.3% | 26.3% | 26.3% | 16.8% | 57.0% | 16.8% | 57.0% |   |
| Maximum Green (s)       | 17.0  | 17.0  | 17.0  | 17.0  | 17.0  | 17.0  | 10.0  | 45.0  | 10.0  | 45.0  |   |
| Yellow Time (s)         | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.0   | 4.0   | 3.0   | 4.0   |   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |   |
| Lead/Lag                |       |       |       |       |       |       | Lead  | Lag   | Lead  | Lag   |   |
| Lead-Lag Optimize?      |       |       |       |       |       |       | Yes   | Yes   | Yes   | Yes   |   |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   |   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None  | None  | None  | None  |   |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |       | 4.0   |       | 4.0   |   |
| Flash Dont Walk (s)     | 23.0  | 23.0  | 23.0  | 23.0  | 23.0  | 23.0  |       | 12.0  |       | 12.0  |   |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     | 0     |       | 0     |       | 0     |   |
| 90th %ile Green (s)     | 14.6  | 14.6  | 14.6  | 14.6  | 14.6  | 14.6  | 5.8   | 31.3  | 7.7   | 33.2  |   |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Hold  |   |
| 70th %ile Green (s)     | 10.9  | 10.9  | 10.9  | 10.9  | 10.9  | 10.9  | 0.0   | 24.9  | 6.8   | 36.7  |   |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Skip  | Gap   | Gap   | Hold  |   |
| 50th %ile Green (s)     | 8.4   | 8.4   | 8.4   | 8.4   | 8.4   | 8.4   | 0.0   | 20.7  | 6.2   | 31.9  |   |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Skip  | Gap   | Gap   | Hold  |   |
| 30th %ile Green (s)     | 7.1   | 7.1   | 7.1   | 7.1   | 7.1   | 7.1   | 0.0   | 17.3  | 0.0   | 17.3  |   |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Skip  | Gap   | Skip  | Hold  |   |
| 10th %ile Green (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 0.0   | 12.0  | 0.0   | 12.0  |   |
| 10th %ile Term Code     | Min   | Min   | Min   | Min   | Min   | Min   | Skip  | Min   | Skip  | Min   |   |

Intersection Summary

Cycle Length: 89.5  
 Actuated Cycle Length: 50.5  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 71.1  
 70th %ile Actuated Cycle: 60.1  
 50th %ile Actuated Cycle: 52.8  
 30th %ile Actuated Cycle: 36.9  
 10th %ile Actuated Cycle: 31.5

Lanes and Geometrics  
56: Beauregard St & Quantrell Ave

Existing 2010  
AM PEAK

| Lane Group          | WBL   | WBR   | NBT  | NBR   | SBL   | SBT  |
|---------------------|-------|-------|------|-------|-------|------|
| Lane Configurations |       |       |      |       |       |      |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           | 0%    |       | 0%   |       |       | 0%   |
| Storage Length (ft) | 0     | 50    |      | 85    | 100   |      |
| Storage Lanes       | 1     | 1     |      | 1     | 1     |      |
| Taper Length (ft)   | 50    |       |      |       | 50    |      |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95 | 1.00  | 1.00  | 0.95 |
| Ped Bike Factor     | 0.98  |       |      |       |       |      |
| Frt                 |       | 0.850 |      | 0.850 |       |      |
| Flt Protected       | 0.950 |       |      |       | 0.950 |      |
| Satd. Flow (prot)   | 1770  | 1583  | 3539 | 1583  | 1770  | 3539 |
| Flt Permitted       | 0.950 |       |      |       | 0.347 |      |
| Satd. Flow (perm)   | 1735  | 1583  | 3539 | 1583  | 646   | 3539 |
| Right Turn on Red   |       | Yes   |      | Yes   |       |      |
| Satd. Flow (RTOR)   |       | 108   |      | 32    |       |      |
| Link Speed (mph)    | 30    |       | 35   |       |       | 35   |
| Link Distance (ft)  | 751   |       | 931  |       |       | 935  |
| Travel Time (s)     | 17.1  |       | 18.1 |       |       | 18.2 |

Intersection Summary

Area Type: Other

Timings  
56: Beauregard St & Quantrell Ave

Existing 2010  
AM PEAK

| Lane Group           | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↑↑    | ↔     | ↔     | ↑↑    |
| Volume (vph)         | 120   | 100   | 735   | 30    | 20    | 370   |
| Turn Type            | NA    | Perm  | NA    | Perm  | Perm  | NA    |
| Protected Phases     | 4     |       | 2     |       |       | 2     |
| Permitted Phases     |       | 4     |       | 2     | 2     |       |
| Detector Phase       | 4     | 4     | 2     | 2     | 2     | 2     |
| Switch Phase         |       |       |       |       |       |       |
| Minimum Initial (s)  | 6.0   | 6.0   | 10.0  | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)    | 12.0  | 12.0  | 16.0  | 16.0  | 16.0  | 16.0  |
| Total Split (s)      | 31.0  | 31.0  | 66.0  | 66.0  | 66.0  | 66.0  |
| Total Split (%)      | 32.0% | 32.0% | 68.0% | 68.0% | 68.0% | 68.0% |
| Yellow Time (s)      | 3.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |
| Recall Mode          | None  | None  | Max   | Max   | Max   | Max   |
| Act Effct Green (s)  | 11.3  | 11.3  | 60.1  | 60.1  | 60.1  | 60.1  |
| Actuated g/C Ratio   | 0.14  | 0.14  | 0.72  | 0.72  | 0.72  | 0.72  |
| v/c Ratio            | 0.54  | 0.35  | 0.31  | 0.03  | 0.05  | 0.16  |
| Control Delay        | 42.0  | 10.1  | 4.9   | 1.7   | 4.4   | 4.2   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 42.0  | 10.1  | 4.9   | 1.7   | 4.4   | 4.2   |
| LOS                  | D     | B     | A     | A     | A     | A     |
| Approach Delay       | 27.5  |       | 4.8   |       |       | 4.2   |
| Approach LOS         | C     |       | A     |       |       | A     |

Intersection Summary

Cycle Length: 97  
 Actuated Cycle Length: 83.4  
 Natural Cycle: 40  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.54  
 Intersection Signal Delay: 8.2  
 Intersection LOS: A  
 Intersection Capacity Utilization 37.0%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 56: Beauregard St & Quantrell Ave



Phasings  
56: Beauregard St & Quantrell Ave

Existing 2010  
AM PEAK

| Lane Group              | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 4     |       | 2     |       |       | 2     |
| Permitted Phases        |       | 4     |       | 2     | 2     |       |
| Minimum Initial (s)     | 6.0   | 6.0   | 10.0  | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 12.0  | 12.0  | 16.0  | 16.0  | 16.0  | 16.0  |
| Total Split (s)         | 31.0  | 31.0  | 66.0  | 66.0  | 66.0  | 66.0  |
| Total Split (%)         | 32.0% | 32.0% | 68.0% | 68.0% | 68.0% | 68.0% |
| Maximum Green (s)       | 25.0  | 25.0  | 60.0  | 60.0  | 60.0  | 60.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | Max   | Max   | Max   | Max   |
| Walk Time (s)           |       |       |       |       |       |       |
| Flash Dont Walk (s)     |       |       |       |       |       |       |
| Pedestrian Calls (#/hr) |       |       |       |       |       |       |
| 90th %ile Green (s)     | 15.9  | 15.9  | 60.0  | 60.0  | 60.0  | 60.0  |
| 90th %ile Term Code     | Gap   | Gap   | MaxR  | MaxR  | MaxR  | MaxR  |
| 70th %ile Green (s)     | 13.1  | 13.1  | 60.0  | 60.0  | 60.0  | 60.0  |
| 70th %ile Term Code     | Gap   | Gap   | MaxR  | MaxR  | MaxR  | MaxR  |
| 50th %ile Green (s)     | 11.3  | 11.3  | 60.0  | 60.0  | 60.0  | 60.0  |
| 50th %ile Term Code     | Gap   | Gap   | MaxR  | MaxR  | MaxR  | MaxR  |
| 30th %ile Green (s)     | 9.6   | 9.6   | 60.0  | 60.0  | 60.0  | 60.0  |
| 30th %ile Term Code     | Gap   | Gap   | MaxR  | MaxR  | MaxR  | MaxR  |
| 10th %ile Green (s)     | 7.2   | 7.2   | 60.0  | 60.0  | 60.0  | 60.0  |
| 10th %ile Term Code     | Gap   | Gap   | MaxR  | MaxR  | MaxR  | MaxR  |

Intersection Summary

Cycle Length: 97  
 Actuated Cycle Length: 83.4  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 87.9  
 70th %ile Actuated Cycle: 85.1  
 50th %ile Actuated Cycle: 83.3  
 30th %ile Actuated Cycle: 81.6  
 10th %ile Actuated Cycle: 79.2

Lanes and Geometrics  
58: Lincoln Rd/Gloucester Rd & Beauregard St

Existing 2010  
AM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT  | WBR  | NBL  | NBT  | NBR   | SBL  | SBT   | SBR  |
|---------------------|-------|------|------|-------|------|------|------|------|-------|------|-------|------|
| Lane Configurations | ↔     | ↕    | ↔    | ↔     | ↕    | ↔    | ↔    | ↕    | ↔     | ↔    | ↕     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12   | 12   | 12   | 12   | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |      | 0%   |       | 0%   |      | 0%   |      | 0%    |      | 0%    |      |
| Storage Length (ft) | 175   |      | 0    | 175   |      | 0    | 0    |      | 0     | 0    |       | 0    |
| Storage Lanes       | 1     |      | 0    | 1     |      | 0    | 0    |      | 1     | 0    |       | 0    |
| Taper Length (ft)   | 50    |      |      | 50    |      |      | 50   |      |       | 50   |       |      |
| 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 |
| Ped Bike Factor     | 0.99  |      |      |       |      |      |      |      | 0.98  |      |       |      |
| Frt                 | 0.975 |      |      |       |      |      |      |      | 0.850 |      | 0.865 |      |
| Flt Protected       | 0.950 |      |      | 0.950 |      |      |      |      | 0.950 |      |       |      |
| Satd. Flow (prot)   | 1770  | 3429 | 0    | 1770  | 3539 | 0    | 0    | 1770 | 1583  | 0    | 1611  | 0    |
| Flt Permitted       | 0.469 |      |      | 0.219 |      |      |      |      | 0.754 |      |       |      |
| Satd. Flow (perm)   | 874   | 3429 | 0    | 408   | 3539 | 0    | 0    | 1405 | 1558  | 0    | 1611  | 0    |
| Right Turn on Red   |       |      | Yes  |       |      | Yes  |      |      | Yes   |      |       | Yes  |
| Satd. Flow (RTOR)   | 19    |      |      |       |      |      |      |      | 54    |      | 391   |      |
| Link Speed (mph)    | 35    |      |      |       | 35   |      |      |      | 35    |      | 30    |      |
| Link Distance (ft)  | 545   |      |      |       | 931  |      |      |      | 614   |      | 831   |      |
| Travel Time (s)     | 10.6  |      |      |       | 18.1 |      |      |      | 12.0  |      | 18.9  |      |

Intersection Summary

Area Type: Other

Timings  
58: Lincoln Rd/Gloucester Rd & Beauregard St

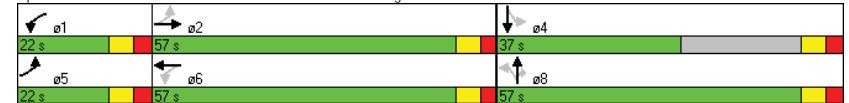
Existing 2010  
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↕     | ↕     |
| Volume (vph)         | 5     | 715   | 25    | 465   | 185   | 0     | 50    | 0     |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     |       | 8     |       | 4     |
| Permitted Phases     | 2     |       | 6     |       | 8     |       | 8     |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 8     | 8     | 8     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 13.0  | 17.0  | 13.0  | 17.0  | 15.0  | 15.0  | 15.0  | 15.0  |
| Total Split (s)      | 22.0  | 57.0  | 22.0  | 57.0  | 57.0  | 57.0  | 57.0  | 37.0  |
| Total Split (%)      | 16.2% | 41.9% | 16.2% | 41.9% | 41.9% | 41.9% | 41.9% | 27.2% |
| Yellow Time (s)      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   |       |       |       |       |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   |       |       |       |       |
| Recall Mode          | None  | Min   | None  | Min   | None  | None  | None  | None  |
| Act Effct Green (s)  | 30.0  | 28.2  | 31.4  | 30.5  |       | 17.1  | 17.1  | 17.1  |
| Actuated g/C Ratio   | 0.46  | 0.44  | 0.49  | 0.47  |       | 0.26  | 0.26  | 0.26  |
| v/c Ratio            | 0.01  | 0.61  | 0.08  | 0.30  |       | 0.53  | 0.12  | 0.01  |
| Control Delay        | 8.8   | 17.5  | 9.2   | 12.2  |       | 28.7  | 8.1   | 0.0   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Total Delay          | 8.8   | 17.5  | 9.2   | 12.2  |       | 28.7  | 8.1   | 0.0   |
| LOS                  | A     | B     | A     | B     |       | C     | A     | A     |
| Approach Delay       | 17.5  |       | 12.0  |       | 24.3  |       | 0.0   |       |
| Approach LOS         | B     |       | B     |       | C     |       | A     |       |

Intersection Summary

Cycle Length: 136  
 Actuated Cycle Length: 64.6  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.61  
 Intersection Signal Delay: 16.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 53.7%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 58: Lincoln Rd/Gloucester Rd & Beauregard St



Phasings  
58: Lincoln Rd/Gloucester Rd & Beauregard St

Existing 2010  
AM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 5     | 2     | 1     | 6     |       | 8     |       | 4     |
| Permitted Phases        | 2     |       | 6     |       | 8     |       | 8     |       |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 13.0  | 17.0  | 13.0  | 17.0  | 15.0  | 15.0  | 15.0  | 15.0  |
| Total Split (s)         | 22.0  | 57.0  | 22.0  | 57.0  | 57.0  | 57.0  | 57.0  | 37.0  |
| Total Split (%)         | 16.2% | 41.9% | 16.2% | 41.9% | 41.9% | 41.9% | 41.9% | 27.2% |
| Maximum Green (s)       | 15.0  | 50.0  | 15.0  | 50.0  | 50.0  | 50.0  | 50.0  | 30.0  |
| Yellow Time (s)         | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   |       |       |       |       |
| Lead-Lag Optimize?      | Yes   | Yes   | Yes   | Yes   |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | Min   | None  | Min   | None  | None  | None  | None  |
| Walk Time (s)           |       | 7.0   |       | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       | 19.0  |       | 23.0  | 23.0  | 23.0  | 23.0  | 22.0  |
| Pedestrian Calls (#/hr) |       | 0     |       | 0     | 0     | 0     | 0     | 0     |
| 90th %ile Green (s)     | 6.1   | 39.0  | 7.0   | 39.9  | 26.8  | 26.8  | 26.8  | 26.8  |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Hold  | Gap   | Gap   | Gap   | Hold  |
| 70th %ile Green (s)     | 0.0   | 31.3  | 6.3   | 44.6  | 20.8  | 20.8  | 20.8  | 20.8  |
| 70th %ile Term Code     | Skip  | Gap   | Gap   | Hold  | Gap   | Gap   | Gap   | Hold  |
| 50th %ile Green (s)     | 0.0   | 26.4  | 0.0   | 26.4  | 17.0  | 17.0  | 17.0  | 17.0  |
| 50th %ile Term Code     | Skip  | Gap   | Skip  | Hold  | Gap   | Gap   | Gap   | Hold  |
| 30th %ile Green (s)     | 0.0   | 18.0  | 0.0   | 18.0  | 12.2  | 12.2  | 12.2  | 12.2  |
| 30th %ile Term Code     | Skip  | Gap   | Skip  | Hold  | Gap   | Gap   | Gap   | Hold  |
| 10th %ile Green (s)     | 0.0   | 24.3  | 0.0   | 24.3  | 10.0  | 10.0  | 10.0  | 10.0  |
| 10th %ile Term Code     | Skip  | Dwell | Skip  | Dwell | Gap   | Gap   | Gap   | Hold  |

Intersection Summary

|                                      |
|--------------------------------------|
| Cycle Length: 136                    |
| Actuated Cycle Length: 64.6          |
| Control Type: Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: 93.8       |
| 70th %ile Actuated Cycle: 79.4       |
| 50th %ile Actuated Cycle: 57.4       |
| 30th %ile Actuated Cycle: 44.2       |
| 10th %ile Actuated Cycle: 48.3       |

Lanes and Geometrics  
59: Beauregard St & N Chambliss St/Plaza at Landmark

Existing 2010  
AM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT  | NBR   | SBL   | SBT  | SBR   |
|---------------------|-------|------|-------|-------|-------|------|-------|------|-------|-------|------|-------|
| Lane Configurations |       |      |       |       |       |      |       |      |       |       |      |       |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12    |
| Grade (%)           |       | 0%   |       |       | 0%    |      |       | 0%   |       |       |      | 0%    |
| Storage Length (ft) | 0     |      | 75    | 0     |       | 0    | 100   |      | 140   | 170   |      | 0     |
| Storage Lanes       | 1     |      | 1     | 1     |       | 0    | 1     |      | 1     | 1     |      | 0     |
| Taper Length (ft)   | 50    |      |       | 50    |       |      | 50    |      |       | 50    |      |       |
| Lane Util. Factor   | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 0.95 | 1.00  | 1.00  | 0.95 | 0.95  |
| Ped Bike Factor     |       |      |       |       | 0.99  |      |       |      |       | 0.97  |      |       |
| Frt                 |       |      | 0.850 |       | 0.925 |      |       |      | 0.850 |       |      | 0.998 |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      | 0.950 |      |       | 0.950 |      |       |
| Satd. Flow (prot)   | 1770  | 1863 | 1583  | 1770  | 1712  | 0    | 1770  | 3539 | 1583  | 1770  | 3532 | 0     |
| Flt Permitted       | 0.950 |      |       | 0.950 |       |      | 0.270 |      |       | 0.358 |      |       |
| Satd. Flow (perm)   | 1770  | 1863 | 1583  | 1770  | 1712  | 0    | 503   | 3539 | 1543  | 667   | 3532 | 0     |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |       |      | Yes   |       |      | Yes   |
| Satd. Flow (RTOR)   |       |      | 484   |       | 22    |      |       |      | 35    |       | 1    |       |
| Link Speed (mph)    |       | 30   |       |       | 25    |      |       | 25   |       |       | 35   |       |
| Link Distance (ft)  |       | 622  |       |       | 252   |      |       | 846  |       |       | 464  |       |
| Travel Time (s)     |       | 14.1 |       |       | 6.9   |      |       | 23.1 |       |       | 9.0  |       |

Intersection Summary

|            |       |
|------------|-------|
| Area Type: | Other |
|------------|-------|

Timings

59: Beauregard St & N Chambliss St/Plaza at Landmark

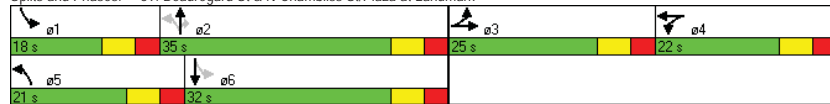
Existing 2010  
AM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↘     | ↖     | ↗     | ↖     | ↗     | ↘     | ↖     | ↗     |
| Volume (vph)         | 120   | 25    | 450   | 55    | 20    | 395   | 720   | 40    | 15    | 435   |
| Turn Type            | Split | NA    | Free  | Split | NA    | pm+pt | NA    | Perm  | pm+pt | NA    |
| Protected Phases     | 3     | 3     |       | 4     | 4     | 5     | 2     |       | 1     | 6     |
| Permitted Phases     |       |       | Free  |       |       | 2     |       | 2     | 6     |       |
| Detector Phase       | 3     | 3     |       | 4     | 4     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   |       | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 1.0   | 4.0   |
| Minimum Split (s)    | 12.0  | 12.0  |       | 12.0  | 12.0  | 12.0  | 22.0  | 22.0  | 12.0  | 22.0  |
| Total Split (s)      | 25.0  | 25.0  | 0.0   | 22.0  | 22.0  | 21.0  | 35.0  | 35.0  | 18.0  | 32.0  |
| Total Split (%)      | 25.0% | 25.0% | 0.0%  | 22.0% | 22.0% | 21.0% | 35.0% | 35.0% | 18.0% | 32.0% |
| Yellow Time (s)      | 4.0   | 4.0   |       | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   |       | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -5.0  |
| Total Lost Time (s)  | 7.0   | 7.0   | 4.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 2.0   |
| Lead/Lag             | Lead  | Lead  |       | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   |       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  |       | None  | None  | None  | C-Min | C-Min | None  | C-Min |
| Act Effct Green (s)  | 11.6  | 11.6  | 100.0 | 8.7   | 8.7   | 61.2  | 56.2  | 56.2  | 34.9  | 35.0  |
| Actuated g/C Ratio   | 0.12  | 0.12  | 1.00  | 0.09  | 0.09  | 0.61  | 0.56  | 0.56  | 0.35  | 0.35  |
| v/c Ratio            | 0.63  | 0.12  | 0.31  | 0.38  | 0.26  | 0.69  | 0.39  | 0.05  | 0.06  | 0.38  |
| Control Delay        | 55.1  | 39.0  | 0.5   | 49.5  | 28.9  | 29.2  | 20.5  | 11.0  | 14.1  | 26.9  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 55.1  | 39.0  | 0.5   | 49.5  | 28.9  | 29.2  | 20.5  | 11.0  | 14.1  | 26.9  |
| LOS                  | E     | D     | A     | D     | C     | C     | C     | B     | B     | C     |
| Approach Delay       |       | 13.1  |       |       | 40.7  |       | 23.1  |       |       | 26.5  |
| Approach LOS         |       | B     |       |       | D     |       | C     |       |       | C     |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 23 (23%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.69  
 Intersection Signal Delay: 21.9  
 Intersection LOS: C  
 Intersection Capacity Utilization 62.4%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 59: Beauregard St & N Chambliss St/Plaza at Landmark



Phasings

59: Beauregard St & N Chambliss St/Plaza at Landmark

Existing 2010  
AM PEAK

| Lane Group              | EBL   | EBT   | EBR  | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 3     | 3     |      | 4     | 4     | 5     | 2     |       | 1     | 6     |
| Permitted Phases        |       |       | Free |       |       | 2     |       | 2     | 6     |       |
| Minimum Initial (s)     | 4.0   | 4.0   |      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 1.0   | 4.0   |
| Minimum Split (s)       | 12.0  | 12.0  |      | 12.0  | 12.0  | 12.0  | 22.0  | 22.0  | 12.0  | 22.0  |
| Total Split (s)         | 25.0  | 25.0  | 0.0  | 22.0  | 22.0  | 21.0  | 35.0  | 35.0  | 18.0  | 32.0  |
| Total Split (%)         | 25.0% | 25.0% | 0.0% | 22.0% | 22.0% | 21.0% | 35.0% | 35.0% | 18.0% | 32.0% |
| Maximum Green (s)       | 18.0  | 18.0  |      | 15.0  | 15.0  | 14.0  | 28.0  | 28.0  | 11.0  | 25.0  |
| Yellow Time (s)         | 4.0   | 4.0   |      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   |      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lead  |      | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      | Yes   | Yes   |      | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Vehicle Extension (s)   | 2.0   | 2.0   |      | 3.0   | 3.0   | 2.0   | 4.0   | 4.0   | 2.0   | 4.0   |
| Minimum Gap (s)         | 2.0   | 2.0   |      | 3.0   | 3.0   | 2.0   | 4.0   | 4.0   | 2.0   | 4.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  |      | None  | None  | None  | C-Min | C-Min | None  | C-Min |
| Walk Time (s)           |       |       |      | 7.0   | 7.0   |       |       |       |       |       |
| Flash Dont Walk (s)     |       |       |      | 22.0  | 22.0  |       |       |       |       |       |
| Pedestrian Calls (#/hr) |       |       |      | 0     | 0     |       |       |       |       |       |
| 90th %ile Green (s)     | 16.4  | 16.4  |      | 11.9  | 11.9  | 18.7  | 37.9  | 37.9  | 5.8   | 25.0  |
| 90th %ile Term Code     | Gap   | Gap   |      | Gap   | Gap   | Max   | Coord | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 13.6  | 13.6  |      | 10.0  | 10.0  | 23.4  | 43.2  | 43.2  | 5.2   | 25.0  |
| 70th %ile Term Code     | Gap   | Gap   |      | Gap   | Gap   | Max   | Coord | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 11.6  | 11.6  |      | 8.7   | 8.7   | 24.8  | 58.7  | 58.7  | 0.0   | 26.9  |
| 50th %ile Term Code     | Gap   | Gap   |      | Gap   | Gap   | Coord | Coord | Coord | Skip  | Coord |
| 30th %ile Green (s)     | 9.6   | 9.6   |      | 7.4   | 7.4   | 25.9  | 62.0  | 62.0  | 0.0   | 29.1  |
| 30th %ile Term Code     | Gap   | Gap   |      | Gap   | Gap   | Coord | Coord | Coord | Skip  | Coord |
| 10th %ile Green (s)     | 6.8   | 6.8   |      | 0.0   | 0.0   | 28.3  | 79.2  | 79.2  | 0.0   | 43.9  |
| 10th %ile Term Code     | Gap   | Gap   |      | Skip  | Skip  | Gap   | Coord | Coord | Skip  | Coord |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 23 (23%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated



Lanes and Geometrics

61: N Beauregard St/Beauregard St & Route 236

Existing 2010

AM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|------|------|-------|-------|------|-------|------|-------|-------|-------|------|
| Lane Configurations | ↔↔    | ↕↕   | ↔↔   | ↔↔    | ↕↕    | ↔↔   | ↔↔    | ↕↕   | ↔↔    | ↔↔    | ↔↔    | ↔↔   |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           | 0%    |      | 0%   |       | 0%    |      | 0%    |      | 0%    |       | 0%    |      |
| Storage Length (ft) | 425   |      | 0    | 215   |       | 0    | 120   |      | 0     | 0     |       | 0    |
| Storage Lanes       | 2     |      | 0    | 1     |       | 1    |       |      | 1     | 1     |       | 1    |
| Taper Length (ft)   | 50    |      |      | 50    |       |      | 50    |      |       | 50    |       |      |
| Lane Util. Factor   | 0.97  | 0.95 | 0.95 | 1.00  | 0.95  | 1.00 | 1.00  | 1.00 | 1.00  | 0.95  | 0.95  | 1.00 |
| Ped Bike Factor     | 1.00  |      |      |       | 0.97  |      |       |      | 0.97  |       |       |      |
| Frt                 | 0.997 |      |      |       | 0.850 |      |       |      | 0.850 |       |       |      |
| Flt Protected       | 0.950 |      |      | 0.950 |       |      | 0.950 |      |       | 0.950 | 0.959 |      |
| Satd. Flow (prot)   | 3433  | 3526 | 0    | 1770  | 3539  | 1583 | 1770  | 1863 | 1583  | 1681  | 1697  | 1583 |
| Flt Permitted       | 0.950 |      |      | 0.950 |       |      | 0.950 |      |       | 0.950 | 0.959 |      |
| Satd. Flow (perm)   | 3433  | 3526 | 0    | 1770  | 3539  | 1544 | 1770  | 1863 | 1540  | 1681  | 1697  | 1530 |
| Right Turn on Red   |       |      | Yes  |       |       | Yes  |       |      | Yes   |       |       | Yes  |
| Satd. Flow (RTOR)   | 1     |      |      |       | 69    |      |       |      | 35    |       |       |      |
| Link Speed (mph)    | 40    |      |      |       | 40    |      |       |      | 25    |       |       |      |
| Link Distance (ft)  | 1126  |      |      |       | 1020  |      |       |      | 665   |       |       |      |
| Travel Time (s)     | 19.2  |      |      |       | 17.4  |      |       |      | 18.1  |       |       |      |

Intersection Summary

Area Type: Other

Timings

61: N Beauregard St/Beauregard St & Route 236

Existing 2010

AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔↔    | ↕↕    | ↔↔    | ↕↕    | ↔↔    | ↔↔    | ↕↕    | ↔↔    | ↔↔    | ↔↔    | ↔↔    |
| Volume (vph)         | 490   | 1135  | 50    | 930   | 570   | 95    | 95    | 60    | 700   | 55    | 185   |
| Turn Type            | Prot  | NA    | Prot  | NA    | pm+ov | Split | NA    | pm+ov | Split | NA    | Perm  |
| Protected Phases     | 5     | 2     | 1     | 6     | 3     | 4     | 4     | 1     | 3     | 3     |       |
| Permitted Phases     |       |       |       |       | 6     |       |       | 4     |       |       | 3     |
| Detector Phase       | 5     | 2     | 1     | 6     | 3     | 4     | 4     | 1     | 3     | 3     | 3     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 8.0   | 20.0  | 8.0   | 20.0  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)    | 15.0  | 26.5  | 15.0  | 28.5  | 34.0  | 34.0  | 34.0  | 15.0  | 34.0  | 34.0  | 34.0  |
| Total Split (s)      | 38.0  | 107.5 | 18.0  | 87.5  | 54.0  | 20.5  | 20.5  | 18.0  | 54.0  | 54.0  | 54.0  |
| Total Split (%)      | 19.0% | 53.8% | 9.0%  | 43.8% | 27.0% | 10.3% | 10.3% | 9.0%  | 27.0% | 27.0% | 27.0% |
| Yellow Time (s)      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 2.5   | 3.0   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | -3.0  | -2.5  | -3.0  | -2.5  | -3.0  | -3.0  | -3.0  | -3.0  | -5.0  | -5.0  | -5.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 33.6  | 105.2 | 12.8  | 84.4  | 134.4 | 16.0  | 16.0  | 28.8  | 52.0  | 52.0  | 52.0  |
| Actuated g/C Ratio   | 0.17  | 0.53  | 0.06  | 0.42  | 0.67  | 0.08  | 0.08  | 0.14  | 0.26  | 0.26  | 0.26  |
| v/c Ratio            | 0.91  | 0.67  | 0.47  | 0.67  | 0.57  | 0.72  | 0.68  | 0.25  | 0.93  | 0.92  | 0.40  |
| Control Delay        | 102.4 | 37.2  | 104.1 | 49.5  | 16.1  | 116.4 | 112.3 | 38.4  | 101.6 | 99.2  | 26.1  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 102.4 | 37.2  | 104.1 | 49.5  | 16.1  | 116.4 | 112.3 | 38.4  | 101.6 | 99.2  | 26.1  |
| LOS                  | F     | D     | F     | D     | B     | F     | F     | D     | F     | F     | C     |
| Approach Delay       | 56.6  |       | 39.0  |       | 96.0  |       | 85.8  |       |       |       |       |
| Approach LOS         | E     |       | D     |       | F     |       | F     |       |       |       |       |

Intersection Summary

Cycle Length: 200  
 Actuated Cycle Length: 200  
 Offset: 148 (74%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 135  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.93  
 Intersection Signal Delay: 58.9  
 Intersection LOS: E  
 Intersection Capacity Utilization 77.2%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 61: N Beauregard St/Beauregard St & Route 236



Phasings

61: N Beauregard St/Beauregard St & Route 236

Existing 2010

AM PEAK



| Lane Group              | EBL   | EBT   | WBL  | WBT   | WBR   | NBL   | NBT   | NBR  | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|------|-------|-------|-------|-------|------|-------|-------|-------|
| Protected Phases        | 5     | 2     | 1    | 6     | 3     | 4     | 4     | 1    | 3     | 3     |       |
| Permitted Phases        |       |       |      | 6     | 4     |       |       | 4    |       |       | 3     |
| Minimum Initial (s)     | 8.0   | 20.0  | 8.0  | 20.0  | 8.0   | 8.0   | 8.0   | 8.0  | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)       | 15.0  | 26.5  | 15.0 | 28.5  | 34.0  | 34.0  | 34.0  | 15.0 | 34.0  | 34.0  | 34.0  |
| Total Split (s)         | 38.0  | 107.5 | 18.0 | 87.5  | 54.0  | 20.5  | 20.5  | 18.0 | 54.0  | 54.0  | 54.0  |
| Total Split (%)         | 19.0% | 53.8% | 9.0% | 43.8% | 27.0% | 10.3% | 10.3% | 9.0% | 27.0% | 27.0% | 27.0% |
| Maximum Green (s)       | 31.0  | 101.0 | 11.0 | 81.0  | 47.0  | 13.5  | 13.5  | 11.0 | 47.0  | 47.0  | 47.0  |
| Yellow Time (s)         | 4.0   | 4.0   | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0  | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 2.5   | 3.0  | 2.5   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   | Lead | Lag   | Lead  | Lag   | Lead  | Lead | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?      | Yes   | Yes   | Yes  | Yes   | Yes   | Yes   | Yes   | Yes  | Yes   | Yes   | Yes   |
| Vehicle Extension (s)   | 2.0   | 3.0   | 2.0  | 3.0   | 3.0   | 3.0   | 2.0   | 3.0  | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 2.0   | 3.0   | 2.0  | 3.0   | 3.0   | 3.0   | 3.0   | 2.0  | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | C-Max | None | C-Max | None  | None  | None  | None | None  | None  | None  |
| Walk Time (s)           |       | 7.0   |      | 7.0   |       | 7.0   |       | 7.0  |       | 7.0   |       |
| Flash Dont Walk (s)     |       |       |      | 15.0  |       | 20.0  |       | 20.0 |       | 20.0  |       |
| Pedestrian Calls (#/hr) |       |       |      | 0     |       | 0     |       | 0    |       | 0     |       |
| 90th %ile Green (s)     | 31.0  | 101.0 | 11.0 | 81.0  | 47.0  | 13.5  | 13.5  | 11.0 | 47.0  | 47.0  | 47.0  |
| 90th %ile Term Code     | Max   | Coord | Max  | Coord | Max   | Max   | Max   | Max  | Max   | Max   | Max   |
| 70th %ile Green (s)     | 31.0  | 101.0 | 11.0 | 81.0  | 47.0  | 13.5  | 13.5  | 11.0 | 47.0  | 47.0  | 47.0  |
| 70th %ile Term Code     | Max   | Coord | Max  | Coord | Max   | Max   | Max   | Max  | Max   | Max   | Max   |
| 50th %ile Green (s)     | 31.0  | 101.5 | 10.5 | 81.0  | 47.0  | 13.5  | 13.5  | 10.5 | 47.0  | 47.0  | 47.0  |
| 50th %ile Term Code     | Max   | Coord | Gap  | Coord | Max   | Max   | Max   | Gap  | Max   | Max   | Max   |
| 30th %ile Green (s)     | 31.0  | 103.3 | 8.7  | 81.0  | 47.0  | 13.5  | 13.5  | 8.7  | 47.0  | 47.0  | 47.0  |
| 30th %ile Term Code     | Max   | Coord | Gap  | Coord | Max   | Max   | Max   | Gap  | Max   | Max   | Max   |
| 10th %ile Green (s)     | 28.9  | 106.5 | 8.0  | 85.6  | 47.0  | 11.0  | 11.0  | 8.0  | 47.0  | 47.0  | 47.0  |
| 10th %ile Term Code     | Gap   | Coord | Min  | Coord | Max   | Gap   | Gap   | Min  | Max   | Max   | Max   |

Intersection Summary

Cycle Length: 200

Actuated Cycle Length: 200

Offset: 148 (74%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Control Type: Actuated-Coordinated

Lanes and Geometrics

67: Beauregard St & Lincolnia Rd Spur

Existing 2010

AM PEAK



| Lane Group          | EBL  | EBT  | WBT   | WBR  | SBL  | SBR  |
|---------------------|------|------|-------|------|------|------|
| Lane Configurations |      | ↑↑   | ↑↑    |      |      |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           |      | 0%   | 0%    |      | 0%   |      |
| Storage Length (ft) |      | 0    |       | 0    | 0    | 0    |
| Storage Lanes       |      | 0    |       | 0    | 0    | 0    |
| Taper Length (ft)   |      | 50   |       | 50   |      |      |
| Lane Util. Factor   | 1.00 | 0.95 | 0.95  | 0.95 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      | 0.954 |      |      |      |
| Flt Protected       |      |      |       |      |      |      |
| Satd. Flow (prot)   | 0    | 3539 | 3376  | 0    | 0    | 0    |
| Flt Permitted       |      |      |       |      |      |      |
| Satd. Flow (perm)   | 0    | 3539 | 3376  | 0    | 0    | 0    |
| Link Speed (mph)    |      | 35   | 35    |      | 25   |      |
| Link Distance (ft)  |      | 464  | 545   |      | 446  |      |
| Travel Time (s)     |      | 9.0  | 10.6  |      | 12.2 |      |

Intersection Summary

Area Type: Other

Lanes and Geometrics  
90: N Jordan St & Seminary Rd/ Seminary Rd

Existing 2010  
AM PEAK

| Lane Group          | EBT   | EBR  | WBL  | WBT   | NBL   | NBR   |
|---------------------|-------|------|------|-------|-------|-------|
| Lane Configurations | ↔↔    |      | ↔    | ↔↔    | ↔     | ↔     |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900  |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12    |
| Grade (%)           | 0%    |      |      | 0%    | 0%    |       |
| Storage Length (ft) |       | 0    | 0    |       | 0     | 250   |
| Storage Lanes       |       | 0    | 0    |       | 1     | 1     |
| Taper Length (ft)   |       |      | 50   |       | 50    |       |
| Lane Util. Factor   | 0.95  | 0.95 | 0.95 | 0.95  | 1.00  | 1.00  |
| Ped Bike Factor     | 0.99  |      |      |       |       |       |
| Frt                 | 0.978 |      |      |       |       | 0.850 |
| Flt Protected       |       |      |      | 0.999 | 0.950 |       |
| Satd. Flow (prot)   | 3441  | 0    | 0    | 3536  | 1770  | 1583  |
| Flt Permitted       |       |      |      | 0.919 | 0.950 |       |
| Satd. Flow (perm)   | 3441  | 0    | 0    | 3253  | 1770  | 1583  |
| Right Turn on Red   |       | Yes  |      |       |       | Yes   |
| Satd. Flow (RTOR)   | 24    |      |      |       |       | 72    |
| Link Speed (mph)    | 35    |      |      | 35    | 25    |       |
| Link Distance (ft)  | 759   |      |      | 747   | 1370  |       |
| Travel Time (s)     | 14.8  |      |      | 14.6  | 37.4  |       |

Intersection Summary

Area Type: Other

Timings  
90: N Jordan St & Seminary Rd/ Seminary Rd

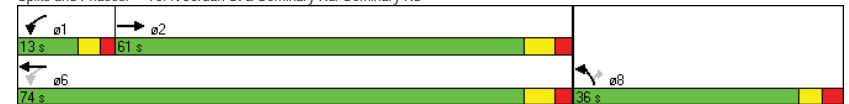
Existing 2010  
AM PEAK

| Lane Group           | EBT   | WBL   | WBT   | NBL   | NBR   |
|----------------------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔↔    |       | ↔↔    | ↔     | ↔     |
| Volume (vph)         | 655   | 20    | 815   | 480   | 70    |
| Turn Type            | NA    | pm+pt | NA    | NA    | Perm  |
| Protected Phases     | 2     | 1     | 6     | 8     |       |
| Permitted Phases     |       | 6     |       |       | 8     |
| Detector Phase       | 2     | 1     | 6     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 10.0  | 6.0   | 16.0  | 6.0   | 6.0   |
| Minimum Split (s)    | 30.5  | 11.0  | 30.5  | 22.0  | 22.0  |
| Total Split (s)      | 61.0  | 13.0  | 74.0  | 36.0  | 36.0  |
| Total Split (%)      | 55.5% | 11.8% | 67.3% | 32.7% | 32.7% |
| Yellow Time (s)      | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.5   | 2.0   | 2.5   | 3.0   | 3.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.5   | 5.0   | 6.5   | 6.0   | 6.0   |
| Lead/Lag             | Lag   | Lead  |       |       |       |
| Lead-Lag Optimize?   | Yes   | Yes   |       |       |       |
| Recall Mode          | C-Max | None  | C-Max | None  | None  |
| Act Effct Green (s)  | 67.5  |       | 67.5  | 30.0  | 30.0  |
| Actuated g/C Ratio   | 0.61  |       | 0.61  | 0.27  | 0.27  |
| v/c Ratio            | 0.39  |       | 0.45  | 1.07  | 0.15  |
| Control Delay        | 3.7   |       | 12.2  | 99.6  | 8.6   |
| Queue Delay          | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Total Delay          | 3.7   |       | 12.2  | 99.6  | 8.6   |
| LOS                  | A     |       | B     | F     | A     |
| Approach Delay       | 3.7   |       | 12.2  | 88.1  |       |
| Approach LOS         | A     |       | B     | F     |       |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 90 (82%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.07  
 Intersection Signal Delay: 28.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 73.9%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 90: N Jordan St & Seminary Rd/ Seminary Rd



Phasings  
90: N Jordan St & Seminary Rd/ Seminary Rd

Existing 2010  
AM PEAK

|                         | →     | ↖     | ←     | ↗     | ↘     |
|-------------------------|-------|-------|-------|-------|-------|
| Lane Group              | EBT   | WBL   | WBT   | NBL   | NBR   |
| Protected Phases        | 2     | 1     | 6     | 8     |       |
| Permitted Phases        |       | 6     |       | 8     |       |
| Minimum Initial (s)     | 10.0  | 6.0   | 16.0  | 6.0   | 6.0   |
| Minimum Split (s)       | 30.5  | 11.0  | 30.5  | 22.0  | 22.0  |
| Total Split (s)         | 61.0  | 13.0  | 74.0  | 36.0  | 36.0  |
| Total Split (%)         | 55.5% | 11.8% | 67.3% | 32.7% | 32.7% |
| Maximum Green (s)       | 54.5  | 8.0   | 67.5  | 30.0  | 30.0  |
| Yellow Time (s)         | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.5   | 2.0   | 2.5   | 3.0   | 3.0   |
| Lead/Lag                | Lag   | Lead  |       |       |       |
| Lead-Lag Optimize?      | Yes   | Yes   |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | C-Max | None  | C-Max | None  | None  |
| Walk Time (s)           | 12.0  |       | 12.0  | 4.0   | 4.0   |
| Flash Dont Walk (s)     | 12.0  |       | 12.0  | 12.0  | 12.0  |
| Pedestrian Calls (#/hr) | 0     |       | 0     | 0     | 0     |
| 90th %ile Green (s)     | 67.5  | 0.0   | 67.5  | 30.0  | 30.0  |
| 90th %ile Term Code     | Coord | Skip  | Coord | Max   | Max   |
| 70th %ile Green (s)     | 67.5  | 0.0   | 67.5  | 30.0  | 30.0  |
| 70th %ile Term Code     | Coord | Skip  | Coord | Max   | Max   |
| 50th %ile Green (s)     | 67.5  | 0.0   | 67.5  | 30.0  | 30.0  |
| 50th %ile Term Code     | Coord | Skip  | Coord | Max   | Max   |
| 30th %ile Green (s)     | 67.5  | 0.0   | 67.5  | 30.0  | 30.0  |
| 30th %ile Term Code     | Coord | Skip  | Coord | Max   | Max   |
| 10th %ile Green (s)     | 67.5  | 0.0   | 67.5  | 30.0  | 30.0  |
| 10th %ile Term Code     | Coord | Skip  | Coord | Max   | Max   |

| Intersection Summary   |   |  |  |  |  |
|------------------------|---|--|--|--|--|
| Cycle Length:          | 110   |  |  |  |  |
| Actuated Cycle Length: | 110   |  |  |  |  |
| Offset:                | 90 (82%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow |  |  |  |  |
| Control Type:          | Actuated-Coordinated  |  |  |  |  |

Lanes and Geometrics  
93: Hammond M.S./Encore Apts & Seminary Rd

Existing 2010  
AM PEAK


|                     | ↖    | →     | ↗    | ↖    | ←     | ↗    | ↖    | ↖     | ↖     | ↖     | ↖    | ↖    | ↖     |
|---------------------|------|-------|------|------|-------|------|------|-------|-------|-------|------|------|-------|
| Lane Group          | EBL  | EBT   | EBR  | WBL  | WBT   | WBR  | NBL  | NBT   | NBR   | SBL   | SBT  | SBR  |       |
| Lane Configurations |      | ↕↕    |      |      | ↕↕↕   |      |      | ↕     | ↕     | ↕     |      | ↕    | ↕     |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900  | 1900  | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12    | 12    | 12   | 12   | 12    |
| Grade (%)           |      | 0%    |      |      | 0%    |      |      | 0%    |       |       | 0%   |      | 0%    |
| Storage Length (ft) | 0    |       | 0    | 0    |       | 50   | 0    |       | 0     | 0     |      | 0    | 0     |
| Storage Lanes       | 0    |       | 0    | 0    |       | 1    | 0    |       | 1     | 1     |      | 1    | 1     |
| Taper Length (ft)   | 50   |       |      | 50   |       |      | 50   |       |       | 50    |      |      |       |
| Lane Util. Factor   | 0.95 | 0.95  | 1.00 | 1.00 | 0.91  | 0.91 | 1.00 | 1.00  | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  |
| Ped Bike Factor     |      |       |      |      |       |      |      |       |       |       |      |      |       |
| Frt                 |      |       |      |      | 0.999 |      |      |       | 0.850 |       |      |      | 0.850 |
| Flt Protected       |      | 0.999 |      |      |       |      |      | 0.950 |       | 0.950 |      |      |       |
| Satd. Flow (prot)   | 0    | 3536  | 0    | 0    | 5080  | 0    | 0    | 1770  | 1583  | 1770  | 0    | 1583 |       |
| Flt Permitted       |      | 0.925 |      |      |       |      |      | 0.950 |       | 0.740 |      |      |       |
| Satd. Flow (perm)   | 0    | 3274  | 0    | 0    | 5080  | 0    | 0    | 1770  | 1583  | 1378  | 0    | 1583 |       |
| Right Turn on Red   |      |       | Yes  |      |       | Yes  |      |       | Yes   |       |      | Yes  |       |
| Satd. Flow (RTOR)   |      |       |      |      | 1     |      |      |       | 5     |       |      | 38   |       |
| Link Speed (mph)    |      | 35    |      |      | 35    |      |      | 25    |       | 25    |      | 25   |       |
| Link Distance (ft)  |      | 239   |      |      | 295   |      |      | 257   |       | 372   |      | 372  |       |
| Travel Time (s)     |      | 4.7   |      |      | 5.7   |      |      | 7.0   |       | 10.1  |      | 10.1 |       |

| Intersection Summary |       |
|----------------------|-------|
| Area Type:           | Other |

Timings

93: Hammond M.S./Encore Apts & Seminary Rd

Existing 2010  
AM PEAK

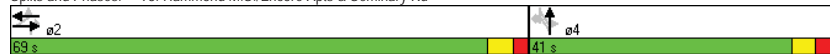


| Lane Group           | EBL   | EBT   | WBT   | NBT   | NBR    | SBL   | SBR    |
|----------------------|-------|-------|-------|-------|--------|-------|--------|
| Lane Configurations  |       | ↕↕    | ↕↕    | ↕     | ↕      | ↕     | ↕      |
| Volume (vph)         | 10    | 735   | 1340  | 0     | 5      | 25    | 45     |
| Turn Type            | Perm  | NA    | NA    | NA    | custom | D.Pm  | custom |
| Protected Phases     |       | 2     | 2     | 4     |        |       |        |
| Permitted Phases     | 2     |       |       |       | 2      | 4     | 4      |
| Detector Phase       | 2     | 2     | 2     | 4     | 2      | 4     | 4      |
| Switch Phase         |       |       |       |       |        |       |        |
| Minimum Initial (s)  | 10.0  | 10.0  | 10.0  | 6.0   | 10.0   | 6.0   | 6.0    |
| Minimum Split (s)    | 21.5  | 21.5  | 21.5  | 29.0  | 21.5   | 29.0  | 29.0   |
| Total Split (s)      | 69.0  | 69.0  | 69.0  | 41.0  | 69.0   | 41.0  | 41.0   |
| Total Split (%)      | 62.7% | 62.7% | 62.7% | 37.3% | 62.7%  | 37.3% | 37.3%  |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.0   | 3.5    | 3.0   | 3.0    |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 3.0   | 2.0    | 3.0   | 3.0    |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0    | 0.0   | 0.0    |
| Total Lost Time (s)  | 5.5   | 5.5   | 5.5   | 6.0   | 5.5    | 6.0   | 6.0    |
| Lead/Lag             |       |       |       |       |        |       |        |
| Lead-Lag Optimize?   |       |       |       |       |        |       |        |
| Recall Mode          | C-Max | C-Max | C-Max | None  | C-Max  | None  | None   |
| Act Effct Green (s)  |       | 94.1  | 94.1  | 7.9   | 94.1   | 7.9   | 7.9    |
| Actuated g/C Ratio   |       | 0.86  | 0.86  | 0.07  | 0.86   | 0.07  | 0.07   |
| v/c Ratio            |       | 0.29  | 0.33  | 0.21  | 0.00   | 0.28  | 0.32   |
| Control Delay        |       | 2.6   | 0.8   | 51.2  | 1.2    | 54.6  | 25.4   |
| Queue Delay          |       | 0.1   | 0.4   | 0.0   | 0.0    | 0.0   | 0.0    |
| Total Delay          |       | 2.7   | 1.2   | 51.2  | 1.2    | 54.6  | 25.4   |
| LOS                  |       | A     | A     | D     | A      | D     | C      |
| Approach Delay       |       | 2.7   | 1.2   | 43.4  |        |       |        |
| Approach LOS         |       | A     | A     | D     |        |       |        |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 100 (91%), Referenced to phase 2:WBEB, Start of Yellow  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.33  
 Intersection Signal Delay: 3.4  
 Intersection LOS: A  
 Intersection Capacity Utilization 50.6%  
 ICU Level of Service A  
 Analysis Period (min) 15


Splits and Phases: 93: Hammond M.S./Encore Apts & Seminary Rd



Phasings

93: Hammond M.S./Encore Apts & Seminary Rd

Existing 2010  
AM PEAK



| Lane Group              | EBL   | EBT   | WBT   | NBT   | NBR   | SBL   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 2     | 2     | 4     |       |       |       |
| Permitted Phases        | 2     |       |       |       | 2     | 4     | 4     |
| Minimum Initial (s)     | 10.0  | 10.0  | 10.0  | 6.0   | 10.0  | 6.0   | 6.0   |
| Minimum Split (s)       | 21.5  | 21.5  | 21.5  | 29.0  | 21.5  | 29.0  | 29.0  |
| Total Split (s)         | 69.0  | 69.0  | 69.0  | 41.0  | 69.0  | 41.0  | 41.0  |
| Total Split (%)         | 62.7% | 62.7% | 62.7% | 37.3% | 62.7% | 37.3% | 37.3% |
| Maximum Green (s)       | 63.5  | 63.5  | 63.5  | 35.0  | 63.5  | 35.0  | 35.0  |
| Yellow Time (s)         | 3.5   | 3.5   | 3.5   | 3.0   | 3.5   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   |
| Lead/Lag                |       |       |       |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | C-Max | C-Max | C-Max | None  | C-Max | None  | None  |
| Walk Time (s)           |       |       |       | 7.0   |       | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |       |       | 16.0  |       | 16.0  | 16.0  |
| Pedestrian Calls (#/hr) |       |       |       | 0     |       | 0     | 0     |
| 90th %ile Green (s)     | 87.9  | 87.9  | 87.9  | 10.6  | 87.9  | 10.6  | 10.6  |
| 90th %ile Term Code     | Coord | Coord | Coord | Gap   | Coord | Gap   | Gap   |
| 70th %ile Green (s)     | 89.7  | 89.7  | 89.7  | 8.8   | 89.7  | 8.8   | 8.8   |
| 70th %ile Term Code     | Coord | Coord | Coord | Gap   | Coord | Gap   | Gap   |
| 50th %ile Green (s)     | 90.9  | 90.9  | 90.9  | 7.6   | 90.9  | 7.6   | 7.6   |
| 50th %ile Term Code     | Coord | Coord | Coord | Gap   | Coord | Gap   | Gap   |
| 30th %ile Green (s)     | 92.2  | 92.2  | 92.2  | 6.3   | 92.2  | 6.3   | 6.3   |
| 30th %ile Term Code     | Coord | Coord | Coord | Gap   | Coord | Gap   | Gap   |
| 10th %ile Green (s)     | 104.5 | 104.5 | 104.5 | 0.0   | 104.5 | 0.0   | 0.0   |
| 10th %ile Term Code     | Coord | Coord | Coord | Skip  | Coord | Skip  | Skip  |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 100 (91%), Referenced to phase 2:WBEB, Start of Yellow  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
100: Kenmore Ave & Seminary Rd

Existing 2010  
AM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL  | WBT   | WBR  | NBL   | NBT  | NBR   | SBL  | SBT   | SBR  |
|---------------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|
| Lane Configurations |       |      |       |      |       |      |       |      |       |      |       |      |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12   | 12    | 12   | 12    | 12   | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |      | 0%    |      | 0%    |      | 0%    |      | 0%    |      | 0%    |      |
| Storage Length (ft) | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    |
| Storage Lanes       | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 1    | 0     | 0    | 1     | 0    |
| Taper Length (ft)   | 50    |      |       | 50   |       |      | 50    |      |       | 50   |       |      |
| Lane Util. Factor   | 1.00  | 0.91 | 0.91  | 1.00 | 0.91  | 0.91 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 |
| Ped Bike Factor     | 0.989 |      | 0.993 |      | 0.865 |      | 0.865 |      | 0.865 |      | 0.865 |      |
| Flt Protected       |       |      |       |      |       |      |       |      |       |      |       |      |
| Satd. Flow (prot)   | 0     | 5029 | 0     | 0    | 5050  | 0    | 0     | 0    | 1611  | 0    | 0     | 1611 |
| Flt Permitted       |       |      |       |      |       |      |       |      |       |      |       |      |
| Satd. Flow (perm)   | 0     | 5029 | 0     | 0    | 5050  | 0    | 0     | 0    | 1611  | 0    | 0     | 1611 |
| Link Speed (mph)    | 35    |      | 35    |      | 30    |      | 30    |      | 30    |      | 30    |      |
| Link Distance (ft)  | 105   |      | 248   |      | 787   |      | 674   |      | 674   |      | 15.3  |      |
| Travel Time (s)     | 2.0   |      | 4.8   |      | 17.9  |      | 15.3  |      | 15.3  |      | 15.3  |      |

Intersection Summary

Area Type: Other

Lanes and Geometrics  
191: I-395 SB On-Ramp & Seminary Rd (S)

Existing 2010  
AM PEAK

| Lane Group          | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      |      |      |      |      |      |      |      |      |      |      |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12   |
| Grade (%)           | 0%   |      | 0%   |      | 0%   |      | 0%   |      | 0%   |      | 0%   |      |
| Storage Length (ft) | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Lanes       | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 0    | 0    | 0    |
| Taper Length (ft)   | 50   |      |      | 50   |      |      | 50   |      |      | 50   |      |      |
| Lane Util. Factor   | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91 | 1.00 |
| Ped Bike Factor     |      |      |      |      |      |      |      |      |      |      |      |      |
| Flt Protected       |      |      |      |      |      |      |      |      |      |      |      |      |
| Satd. Flow (prot)   | 0    | 5085 | 1583 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Flt Permitted       |      |      |      |      |      |      |      |      |      |      |      |      |
| Satd. Flow (perm)   | 0    | 5085 | 1583 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 1610 | 3333 |
| Right Turn on Red   | Yes  |      | Yes  |      | Yes  |      | Yes  |      | Yes  |      | Yes  |      |
| Satd. Flow (RTOR)   | 302  |      | 35   |      | 35   |      | 5    |      | 5    |      | 5    |      |
| Link Speed (mph)    | 35   |      | 35   |      | 35   |      | 35   |      | 35   |      | 35   |      |
| Link Distance (ft)  | 352  |      | 349  |      | 797  |      | 278  |      | 278  |      | 278  |      |
| Travel Time (s)     | 6.9  |      | 6.8  |      | 15.5 |      | 5.4  |      | 5.4  |      | 5.4  |      |

Intersection Summary

Area Type: Other

Timings  
191: I-395 SB On-Ramp & Seminary Rd (S)

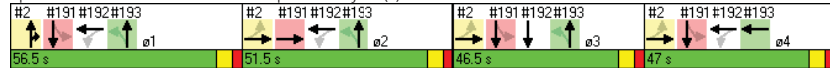
Existing 2010  
AM PEAK

| Lane Group           | EBT   | EBR   | SBL   | SBT   | ø1   | ø3   | ø4   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  | ↑↑↑   | ↑     | ↑     | ↑↑    |      |      |      |
| Volume (vph)         | 845   | 475   | 275   | 220   |      |      |      |
| Turn Type            | NA    | Free  | Perm  | NA    |      |      |      |
| Protected Phases     | 2     |       | 1 3 4 | 1 3 4 | 1    | 3    | 4    |
| Permitted Phases     |       | Free  | 1 3 4 |       |      |      |      |
| Detector Phase       | 2     |       | 1 3 4 | 1 3 4 |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  | 10.0  |       |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    | 22.5  |       |       |       | 22.5 | 22.5 | 23.0 |
| Total Split (s)      | 51.5  | 0.0   | 150.0 | 150.0 | 56.5 | 46.5 | 47.0 |
| Total Split (%)      | 25.6% | 0.0%  | 74.4% | 74.4% | 28%  | 23%  | 23%  |
| Yellow Time (s)      | 4.0   |       |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     | 2.5   |       |       |       | 2.5  | 2.5  | 3.0  |
| Lost Time Adjust (s) | -2.5  | 0.0   | -2.5  | -2.5  |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             | Lag   |       |       |       | Lead | Lead | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          | Min   |       |       |       | Min  | Min  | Min  |
| Act Effct Green (s)  | 47.5  | 200.1 | 144.6 | 144.6 |      |      |      |
| Actuated g/C Ratio   | 0.24  | 1.00  | 0.72  | 0.72  |      |      |      |
| v/c Ratio            | 0.75  | 0.32  | 0.15  | 0.15  |      |      |      |
| Control Delay        | 75.6  | 0.5   | 4.4   | 4.4   |      |      |      |
| Queue Delay          | 0.0   | 0.0   | 1.2   | 0.6   |      |      |      |
| Total Delay          | 75.6  | 0.5   | 5.6   | 5.1   |      |      |      |
| LOS                  | E     | A     | A     | A     |      |      |      |
| Approach Delay       | 48.6  |       |       | 5.3   |      |      |      |
| Approach LOS         | D     |       |       | A     |      |      |      |

Intersection Summary

|   |
|---|
| Cycle Length: 201.5                     |
| Actuated Cycle Length: 200.1            |
| Natural Cycle: 125                      |
| Control Type: Actuated-Uncoordinated    |
| Maximum v/c Ratio: 1.51                 |
| Intersection Signal Delay: 36.8         |
| Intersection Capacity Utilization 40.0% |
| Analysis Period (min) 15                |
| Intersection LOS: D                     |
| ICU Level of Service A                  |

Splits and Phases: 191: I-395 SB On-Ramp & Seminary Rd (S)



Phasings  
191: I-395 SB On-Ramp & Seminary Rd (S)

Existing 2010  
AM PEAK

| Lane Group              | EBT   | EBR  | SBL   | SBT   | ø1   | ø3   | ø4   |
|-------------------------|-------|------|-------|-------|------|------|------|
| Protected Phases        | 2     |      |       | 1 3 4 | 1    | 3    | 4    |
| Permitted Phases        |       | Free | 1 3 4 |       |      |      |      |
| Minimum Initial (s)     | 10.0  |      |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       | 22.5  |      |       |       | 22.5 | 22.5 | 23.0 |
| Total Split (s)         | 51.5  | 0.0  | 150.0 | 150.0 | 56.5 | 46.5 | 47.0 |
| Total Split (%)         | 25.6% | 0.0% | 74.4% | 74.4% | 28%  | 23%  | 23%  |
| Maximum Green (s)       | 45.0  |      |       |       | 50.0 | 40.0 | 40.0 |
| Yellow Time (s)         | 4.0   |      |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        | 2.5   |      |       |       | 2.5  | 2.5  | 3.0  |
| Lead/Lag                | Lag   |      |       |       | Lead | Lead | Lag  |
| Lead-Lag Optimize?      |       |      |       |       |      |      |      |
| Vehicle Extension (s)   | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Minimum Gap (s)         | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Recall Mode             | Min   |      |       |       | Min  | Min  | Min  |
| Walk Time (s)           |       |      |       |       |      |      |      |
| Flash Dont Walk (s)     |       |      |       |       |      |      |      |
| Pedestrian Calls (#/hr) |       |      |       |       |      |      |      |
| 90th %ile Green (s)     | 45.0  |      |       |       | 50.0 | 40.0 | 40.0 |
| 90th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 70th %ile Green (s)     | 45.0  |      |       |       | 50.0 | 40.0 | 40.0 |
| 70th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 50th %ile Green (s)     | 45.0  |      |       |       | 50.0 | 40.0 | 40.0 |
| 50th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 30th %ile Green (s)     | 45.0  |      |       |       | 50.0 | 40.0 | 40.0 |
| 30th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 10th %ile Green (s)     | 45.0  |      |       |       | 50.0 | 36.3 | 36.6 |
| 10th %ile Term Code     | Max   |      |       |       | Max  | Gap  | Gap  |

Intersection Summary

|                                      |
|--------------------------------------|
| Cycle Length: 201.5                  |
| Actuated Cycle Length: 200.1         |
| Control Type: Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: 201.5      |
| 70th %ile Actuated Cycle: 201.5      |
| 50th %ile Actuated Cycle: 201.5      |
| 30th %ile Actuated Cycle: 201.5      |
| 10th %ile Actuated Cycle: 194.4      |

Lanes and Geometrics

192: I-395 SB On-Ramp/I-395 SB Off-Ramp & Seminary Rd (N)

Existing 2010

AM PEAK

| Lane Group          | EBL  | EBT  | EBR  | WBL  | WBT   | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR   |
|---------------------|------|------|------|------|-------|------|------|------|------|------|------|-------|
| Lane Configurations |      |      |      |      | ↕↕    |      |      |      |      |      | ↕↕   | ↕     |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12   | 12   | 12   | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12    |
| Grade (%)           |      | 0%   |      |      | 0%    |      |      | 0%   |      |      | 0%   |       |
| Storage Length (ft) | 0    |      | 0    | 0    |       | 0    | 0    |      | 0    | 0    |      | 320   |
| Storage Lanes       | 0    |      | 0    | 0    |       | 0    | 0    |      | 0    | 0    |      | 1     |
| Taper Length (ft)   | 50   |      |      | 50   |       |      | 50   |      |      | 50   |      |       |
| Lane Util. Factor   | 1.00 | 1.00 | 1.00 | 0.95 | 0.95  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00  |
| Ped Bike Factor     |      |      |      |      |       |      |      |      |      |      |      | 0.850 |
| Frt Protected       |      |      |      |      | 0.985 |      |      |      |      |      |      |       |
| Satd. Flow (prot)   | 0    | 0    | 0    | 0    | 3486  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583  |
| Frt Permitted       |      |      |      |      | 0.985 |      |      |      |      |      |      |       |
| Satd. Flow (perm)   | 0    | 0    | 0    | 0    | 3486  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583  |
| Right Turn on Red   |      |      | Yes  | Yes  |       | Yes  |      |      | Yes  |      |      | Yes   |
| Satd. Flow (RTOR)   |      |      |      |      | 97    |      |      |      |      |      |      | 515   |
| Link Speed (mph)    |      | 30   |      |      | 35    |      |      | 35   |      |      | 35   |       |
| Link Distance (ft)  |      | 344  |      |      | 306   |      |      | 278  |      |      | 1472 |       |
| Travel Time (s)     |      | 7.8  |      |      | 6.0   |      |      | 5.4  |      |      | 28.7 |       |

Intersection Summary

Area Type: Other

Timings

192: I-395 SB On-Ramp/I-395 SB Off-Ramp & Seminary Rd (N)

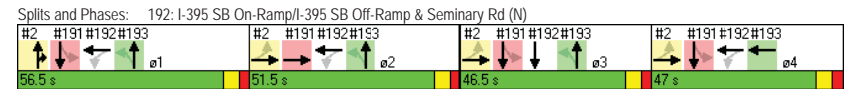
Existing 2010

AM PEAK

| Lane Group           | WBT   | SBT   | SBR   | ø1   | ø2   | ø4   |
|----------------------|-------|-------|-------|------|------|------|
| Lane Configurations  | ↕↕    | ↕↕    | ↕     |      |      |      |
| Volume (vph)         | 620   | 230   | 485   |      |      |      |
| Turn Type            | NA    | NA    | Free  |      |      |      |
| Protected Phases     | 1 2 4 | 3     |       | 1    | 2    | 4    |
| Permitted Phases     |       |       | Free  |      |      |      |
| Detector Phase       | 1 2 4 | 3     |       |      |      |      |
| Switch Phase         |       |       |       |      |      |      |
| Minimum Initial (s)  |       | 10.0  |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    |       | 22.5  |       | 22.5 | 22.5 | 23.0 |
| Total Split (s)      | 155.0 | 46.5  | 0.0   | 56.5 | 51.5 | 47.0 |
| Total Split (%)      | 76.9% | 23.1% | 0.0%  | 28%  | 26%  | 23%  |
| Yellow Time (s)      |       | 4.0   |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     |       | 2.5   |       | 2.5  | 2.5  | 3.0  |
| Lost Time Adjust (s) | -2.5  | -2.5  | 0.0   |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             |       | Lead  |       | Lead | Lag  | Lag  |
| Lead-Lag Optimize?   |       |       |       |      |      |      |
| Recall Mode          |       | Min   |       | Min  | Min  | Min  |
| Act Effct Green (s)  | 150.3 | 41.8  | 200.1 |      |      |      |
| Actuated g/C Ratio   | 0.75  | 0.21  | 1.00  |      |      |      |
| v/c Ratio            | 0.36  | 0.33  | 0.33  |      |      |      |
| Control Delay        | 3.3   | 68.9  | 0.6   |      |      |      |
| Queue Delay          | 0.4   | 0.0   | 0.0   |      |      |      |
| Total Delay          | 3.7   | 68.9  | 0.6   |      |      |      |
| LOS                  | A     | E     | A     |      |      |      |
| Approach Delay       | 3.7   | 22.5  |       |      |      |      |
| Approach LOS         | A     | C     |       |      |      |      |

Intersection Summary

Cycle Length: 201.5  
 Actuated Cycle Length: 200.1  
 Natural Cycle Length: 125  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.51  
 Intersection Signal Delay: 12.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 40.0%  
 ICU Level of Service A  
 Analysis Period (min) 15





Phasings

192: I-395 SB On-Ramp/I-395 SB Off-Ramp & Seminary Rd (N)

Existing 2010

AM PEAK



| Lane Group              | WBT   | SBT   | SBR  | ø1   | ø2   | ø4   |
|-------------------------|-------|-------|------|------|------|------|
| Protected Phases        | 1 2 4 | 3     |      | 1    | 2    | 4    |
| Permitted Phases        | Free  |       |      |      |      |      |
| Minimum Initial (s)     |       | 10.0  |      | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       |       | 22.5  |      | 22.5 | 22.5 | 23.0 |
| Total Split (s)         | 155.0 | 46.5  | 0.0  | 56.5 | 51.5 | 47.0 |
| Total Split (%)         | 76.9% | 23.1% | 0.0% | 28%  | 26%  | 23%  |
| Maximum Green (s)       |       | 40.0  |      | 50.0 | 45.0 | 40.0 |
| Yellow Time (s)         |       | 4.0   |      | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        |       | 2.5   |      | 2.5  | 2.5  | 3.0  |
| Lead/Lag                | Lead  |       |      | Lead |      | Lag  |
| Lead-Lag Optimize?      |       |       |      |      |      |      |
| Vehicle Extension (s)   |       | 3.0   |      | 5.0  | 3.0  | 3.0  |
| Minimum Gap (s)         |       | 3.0   |      | 5.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  |       | 0.0   |      | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      |       | 0.0   |      | 0.0  | 0.0  | 0.0  |
| Recall Mode             |       | Min   |      | Min  | Min  | Min  |
| Walk Time (s)           |       |       |      |      |      |      |
| Flash Dont Walk (s)     |       |       |      |      |      |      |
| Pedestrian Calls (#/hr) |       |       |      |      |      |      |
| 90th %ile Green (s)     |       | 40.0  |      | 50.0 | 45.0 | 40.0 |
| 90th %ile Term Code     |       | Max   |      | Max  | Max  | Max  |
| 70th %ile Green (s)     |       | 40.0  |      | 50.0 | 45.0 | 40.0 |
| 70th %ile Term Code     |       | Max   |      | Max  | Max  | Max  |
| 50th %ile Green (s)     |       | 40.0  |      | 50.0 | 45.0 | 40.0 |
| 50th %ile Term Code     |       | Max   |      | Max  | Max  | Max  |
| 30th %ile Green (s)     |       | 40.0  |      | 50.0 | 45.0 | 40.0 |
| 30th %ile Term Code     |       | Max   |      | Max  | Max  | Max  |
| 10th %ile Green (s)     |       | 36.3  |      | 50.0 | 45.0 | 36.6 |
| 10th %ile Term Code     |       | Gap   |      | Max  | Max  | Gap  |

Intersection Summary

Cycle Length: 201.5  
 Actuated Cycle Length: 200.1  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 201.5  
 70th %ile Actuated Cycle: 201.5  
 50th %ile Actuated Cycle: 201.5  
 30th %ile Actuated Cycle: 201.5  
 10th %ile Actuated Cycle: 194.4

Lanes and Geometrics

193: I-395 NB Off-Ramp/I-395 NB On-Ramp & Seminary Rd (N)

Existing 2010

AM PEAK



| Lane Group          | EBL              | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------------------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |                  |      |      |      | ↑↑   | ↑↑   | ↑↑   | ↑↑   |      |      |      |      |
| Ideal Flow (vphpl)  | 1900             | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12               | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12   |
| Grade (%)           |                  | 0%   |      |      | 0%   |      |      | 0%   |      |      | 0%   |      |
| Storage Length (ft) |                  | 0    |      | 0    |      | 125  |      | 50   |      | 0    |      | 0    |
| Storage Lanes       |                  | 0    |      | 0    |      | 1    |      | 1    |      | 0    |      | 0    |
| Taper Length (ft)   |                  | 50   |      | 50   |      |      |      | 50   |      |      | 50   |      |
| Lane Util. Factor   | 1.00             | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor     |                  |      |      |      |      |      |      |      |      |      |      |      |
| Frt                 | 0.850            |      |      |      |      |      |      |      |      |      |      |      |
| Flt Protected       | 0.950            |      |      |      |      |      |      |      |      |      |      |      |
| Satd. Flow (prot)   | 0                | 0    | 0    | 0    | 3539 | 1583 | 1770 | 3539 | 0    | 0    | 0    | 0    |
| Flt Permitted       | 0.950            |      |      |      |      |      |      |      |      |      |      |      |
| Satd. Flow (perm)   | 0                | 0    | 0    | 0    | 3539 | 1583 | 1770 | 3539 | 0    | 0    | 0    | 0    |
| Right Turn on Red   |                  |      | Yes  |      | Yes  | Yes  | Yes  | Yes  |      |      |      | Yes  |
| Satd. Flow (RTOR)   | 362 83           |      |      |      |      |      |      |      |      |      |      |      |
| Link Speed (mph)    | 35 35 35 35      |      |      |      |      |      |      |      |      |      |      |      |
| Link Distance (ft)  | 306 238 294 1353 |      |      |      |      |      |      |      |      |      |      |      |
| Travel Time (s)     | 6.0 4.6 5.7 26.4 |      |      |      |      |      |      |      |      |      |      |      |

Intersection Summary

Area Type: Other

Timings

193: I-395 NB Off-Ramp/I-395 NB On-Ramp & Seminary Rd (N)

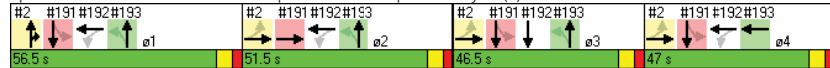
Existing 2010  
AM PEAK

| Lane Group           | WBT   | WBR   | NBL   | NBT   | ø1   | ø2   | ø3   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  | ↑↑    | ↑     | ↑     | ↑↑    |      |      |      |
| Volume (vph)         | 385   | 685   | 615   | 830   |      |      |      |
| Turn Type            | NA    | Free  | Perm  | NA    |      |      |      |
| Protected Phases     | 4     |       | 1 2 3 | 1 2 3 | 1    | 2    | 3    |
| Permitted Phases     |       | Free  | 1 2 3 |       |      |      |      |
| Detector Phase       | 4     |       | 1 2 3 | 1 2 3 |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  | 10.0  |       |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    | 23.0  |       |       |       | 22.5 | 22.5 | 22.5 |
| Total Split (s)      | 47.0  | 0.0   | 154.5 | 154.5 | 56.5 | 51.5 | 46.5 |
| Total Split (%)      | 23.3% | 0.0%  | 76.7% | 76.7% | 28%  | 26%  | 23%  |
| Yellow Time (s)      | 4.0   |       |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     | 3.0   |       |       |       | 2.5  | 2.5  | 2.5  |
| Lost Time Adjust (s) | -3.0  | 0.0   | -2.5  | -2.5  |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             | Lag   |       |       |       | Lead | Lag  | Lead |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          | Min   |       |       |       | Min  | Min  | Min  |
| Act Effct Green (s)  | 42.3  | 200.1 | 149.8 | 149.8 |      |      |      |
| Actuated g/C Ratio   | 0.21  | 1.00  | 0.75  | 0.75  |      |      |      |
| v/c Ratio            | 0.55  | 0.47  | 0.49  | 0.34  |      |      |      |
| Control Delay        | 73.7  | 1.0   | 0.8   | 0.9   |      |      |      |
| Queue Delay          | 0.0   | 0.0   | 3.5   | 1.9   |      |      |      |
| Total Delay          | 73.7  | 1.0   | 4.3   | 2.8   |      |      |      |
| LOS                  | E     | A     | A     | A     |      |      |      |
| Approach Delay       | 27.2  |       |       | 3.5   |      |      |      |
| Approach LOS         | C     |       |       | A     |      |      |      |

Intersection Summary

|  |                        |
|--|------------------------|
| Cycle Length: 201.5                      |                        |
| Actuated Cycle Length: 200.1             |                        |
| Natural Cycle: 125                       |                        |
| Control Type: Actuated-Uncoordinated     |                        |
| Maximum v/c Ratio: 1.51                  |                        |
| Intersection Signal Delay: 13.5          | Intersection LOS: B    |
| Intersection Capacity Utilization 105.5% | ICU Level of Service G |
| Analysis Period (min) 15                 |                        |

Splits and Phases: 193: I-395 NB Off-Ramp/I-395 NB On-Ramp & Seminary Rd (N)



Phasings

193: I-395 NB Off-Ramp/I-395 NB On-Ramp & Seminary Rd (N)

Existing 2010  
AM PEAK

| Lane Group              | WBT   | WBR  | NBL   | NBT   | ø1   | ø2   | ø3   |
|-------------------------|-------|------|-------|-------|------|------|------|
| Protected Phases        | 4     |      |       | 1 2 3 | 1    | 2    | 3    |
| Permitted Phases        |       | Free | 1 2 3 |       |      |      |      |
| Minimum Initial (s)     | 10.0  |      |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       | 23.0  |      |       |       | 22.5 | 22.5 | 22.5 |
| Total Split (s)         | 47.0  | 0.0  | 154.5 | 154.5 | 56.5 | 51.5 | 46.5 |
| Total Split (%)         | 23.3% | 0.0% | 76.7% | 76.7% | 28%  | 26%  | 23%  |
| Maximum Green (s)       | 40.0  |      |       |       | 50.0 | 45.0 | 40.0 |
| Yellow Time (s)         | 4.0   |      |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        | 3.0   |      |       |       | 2.5  | 2.5  | 2.5  |
| Lead/Lag                | Lag   |      |       |       | Lead | Lag  | Lead |
| Lead-Lag Optimize?      |       |      |       |       |      |      |      |
| Vehicle Extension (s)   | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Minimum Gap (s)         | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Recall Mode             | Min   |      |       |       | Min  | Min  | Min  |
| Walk Time (s)           |       |      |       |       |      |      |      |
| Flash Dont Walk (s)     |       |      |       |       |      |      |      |
| Pedestrian Calls (#/hr) |       |      |       |       |      |      |      |
| 90th %ile Green (s)     | 40.0  |      |       |       | 50.0 | 45.0 | 40.0 |
| 90th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 70th %ile Green (s)     | 40.0  |      |       |       | 50.0 | 45.0 | 40.0 |
| 70th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 50th %ile Green (s)     | 40.0  |      |       |       | 50.0 | 45.0 | 40.0 |
| 50th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 30th %ile Green (s)     | 40.0  |      |       |       | 50.0 | 45.0 | 40.0 |
| 30th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 10th %ile Green (s)     | 36.6  |      |       |       | 50.0 | 45.0 | 36.3 |
| 10th %ile Term Code     | Gap   |      |       |       | Max  | Max  | Gap  |

Intersection Summary

|                                      |
|--------------------------------------|
| Cycle Length: 201.5                  |
| Actuated Cycle Length: 200.1         |
| Control Type: Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: 201.5      |
| 70th %ile Actuated Cycle: 201.5      |
| 50th %ile Actuated Cycle: 201.5      |
| 30th %ile Actuated Cycle: 201.5      |
| 10th %ile Actuated Cycle: 194.4      |

Lanes and Geometrics

1: N Pickett St/N Pickett St / Fire Station & Seminary Rd

Existing 2010

PM PEAK

| Lane Group          | EBL  | EBT   | EBR  | WBL  | WBT   | WBR  | NBL  | NBT   | NBR   | SBL  | SBT  | SBR  |
|---------------------|------|-------|------|------|-------|------|------|-------|-------|------|------|------|
| Lane Configurations |      | ↔↔    |      |      | ↔↔    |      |      | ↕     | ↕     |      | ↕    | ↕    |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12    | 12   | 12   | 12   |
| Grade (%)           |      | 0%    |      |      | 0%    |      |      | 0%    |       |      | 0%   |      |
| Storage Length (ft) | 0    |       | 0    | 0    |       | 0    | 0    |       | 50    | 0    |      | 0    |
| Storage Lanes       | 0    |       | 0    | 0    |       | 0    | 0    |       | 1     | 0    |      | 0    |
| Taper Length (ft)   | 50   |       |      | 50   |       |      | 50   |       |       | 50   |      |      |
| Lane Util. Factor   | 0.95 | 0.95  | 0.95 | 0.95 | 0.95  | 0.95 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor     |      | 1.00  |      |      |       |      |      |       | 0.850 |      |      |      |
| Frt                 |      | 0.988 |      |      |       |      |      |       |       |      |      |      |
| Flt Protected       |      |       |      |      | 0.996 |      |      | 0.950 |       |      |      |      |
| Satd. Flow (prot)   | 0    | 3490  | 0    | 0    | 3525  | 0    | 0    | 1770  | 1583  | 0    | 1863 | 0    |
| Flt Permitted       |      |       |      |      | 0.519 |      |      | 0.950 |       |      |      |      |
| Satd. Flow (perm)   | 0    | 3490  | 0    | 0    | 1837  | 0    | 0    | 1770  | 1583  | 0    | 1863 | 0    |
| Right Turn on Red   |      |       | Yes  |      |       | Yes  |      |       | Yes   |      |      | Yes  |
| Satd. Flow (RTOR)   |      | 10    |      |      |       |      |      |       | 54    |      |      |      |
| Link Speed (mph)    |      | 35    |      |      | 35    |      |      | 25    |       |      | 25   |      |
| Link Distance (ft)  |      | 295   |      |      | 759   |      |      | 843   |       |      | 257  |      |
| Travel Time (s)     |      | 5.7   |      |      | 14.8  |      |      | 23.0  |       |      | 7.0  |      |

Intersection Summary

Area Type: Other

Timings

1: N Pickett St/N Pickett St / Fire Station & Seminary Rd

Existing 2010

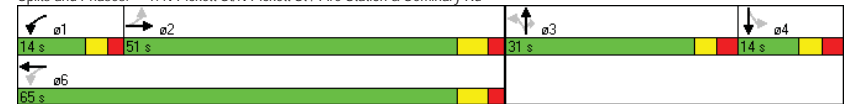
PM PEAK

| Lane Group           | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | ø4   |
|----------------------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations  | ↔↔    |       | ↔↔    |       | ↕     | ↕     |      |
| Volume (vph)         | 1415  | 85    | 870   | 40    | 0     | 50    |      |
| Turn Type            | NA    | pm+pt | NA    | Perm  | NA    | Perm  |      |
| Protected Phases     | 2     | 1     | 6     | 3     | 3     | 4     |      |
| Permitted Phases     |       | 6     |       | 3     |       | 3     |      |
| Detector Phase       | 2     | 1     | 6     | 3     | 3     | 3     |      |
| Switch Phase         |       |       |       |       |       |       |      |
| Minimum Initial (s)  | 10.0  | 5.0   | 10.0  | 7.0   | 7.0   | 7.0   | 5.0  |
| Minimum Split (s)    | 46.5  | 10.0  | 16.5  | 31.0  | 31.0  | 31.0  | 11.0 |
| Total Split (s)      | 51.0  | 14.0  | 65.0  | 31.0  | 31.0  | 31.0  | 14.0 |
| Total Split (%)      | 46.4% | 12.7% | 59.1% | 28.2% | 28.2% | 28.2% | 13%  |
| Yellow Time (s)      | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| All-Red Time (s)     | 2.5   | 2.0   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0  |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      |
| Total Lost Time (s)  | 6.5   | 5.0   | 6.5   | 6.0   | 6.0   | 6.0   |      |
| Lead/Lag             | Lag   | Lead  |       | Lead  | Lead  | Lead  | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |       |       |      |
| Recall Mode          | C-Max | Max   | C-Max | None  | None  | None  | None |
| Act Effct Green (s)  | 44.5  |       | 80.9  |       | 19.4  | 19.4  |      |
| Actuated g/C Ratio   | 0.40  |       | 0.74  |       | 0.18  | 0.18  |      |
| v/c Ratio            | 1.17  |       | 0.57  |       | 0.14  | 0.17  |      |
| Control Delay        | 118.6 |       | 6.7   |       | 36.1  | 10.6  |      |
| Queue Delay          | 0.0   |       | 0.0   |       | 0.0   | 0.0   |      |
| Total Delay          | 118.6 |       | 6.7   |       | 36.1  | 10.6  |      |
| LOS                  | F     |       | A     |       | D     | B     |      |
| Approach Delay       | 118.6 |       | 6.7   |       | 21.9  |       |      |
| Approach LOS         | F     |       | A     |       | C     |       |      |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 100 (91%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.17  
 Intersection Signal Delay: 73.9  
 Intersection LOS: E  
 Intersection Capacity Utilization 91.3%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 1: N Pickett St/N Pickett St / Fire Station & Seminary Rd



Phasings

1: N Pickett St/N Pickett St / Fire Station & Seminary Rd

Existing 2010  
PM PEAK

|                         | →     | ↖     | ←     | ↙     | ↑     | ↗     |      |
|-------------------------|-------|-------|-------|-------|-------|-------|------|
| Lane Group              | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | ø4   |
| Protected Phases        | 2     | 1     | 6     |       | 3     |       | 4    |
| Permitted Phases        |       | 6     |       | 3     |       | 3     |      |
| Minimum Initial (s)     | 10.0  | 5.0   | 10.0  | 7.0   | 7.0   | 7.0   | 5.0  |
| Minimum Split (s)       | 46.5  | 10.0  | 16.5  | 31.0  | 31.0  | 31.0  | 11.0 |
| Total Split (s)         | 51.0  | 14.0  | 65.0  | 31.0  | 31.0  | 31.0  | 14.0 |
| Total Split (%)         | 46.4% | 12.7% | 59.1% | 28.2% | 28.2% | 28.2% | 13%  |
| Maximum Green (s)       | 44.5  | 9.0   | 58.5  | 25.0  | 25.0  | 25.0  | 8.0  |
| Yellow Time (s)         | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| All-Red Time (s)        | 2.5   | 2.0   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0  |
| Lead/Lag                | Lag   | Lead  |       | Lead  | Lead  | Lead  | Lag  |
| Lead-Lag Optimize?      |       |       |       |       |       |       |      |
| Vehicle Extension (s)   | 4.0   | 4.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| Minimum Gap (s)         | 4.0   | 4.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Recall Mode             | C-Max | Max   | C-Max | None  | None  | None  | None |
| Walk Time (s)           | 22.0  |       |       | 7.0   | 7.0   | 7.0   |      |
| Flash Dont Walk (s)     | 18.0  |       |       | 18.0  | 18.0  | 18.0  |      |
| Pedestrian Calls (#/hr) | 0     |       |       | 0     | 0     | 0     |      |
| 90th %ile Green (s)     | 44.5  | 23.0  | 72.5  | 25.0  | 25.0  | 25.0  | 0.0  |
| 90th %ile Term Code     | Coord | MaxR  | Coord | Max   | Max   | Max   | Skip |
| 70th %ile Green (s)     | 44.5  | 23.0  | 72.5  | 25.0  | 25.0  | 25.0  | 0.0  |
| 70th %ile Term Code     | Coord | MaxR  | Coord | Max   | Max   | Max   | Skip |
| 50th %ile Green (s)     | 44.5  | 24.8  | 74.3  | 23.2  | 23.2  | 23.2  | 0.0  |
| 50th %ile Term Code     | Coord | MaxR  | Coord | Gap   | Gap   | Gap   | Skip |
| 30th %ile Green (s)     | 44.5  | 32.0  | 81.5  | 16.0  | 16.0  | 16.0  | 0.0  |
| 30th %ile Term Code     | Coord | MaxR  | Coord | Gap   | Gap   | Gap   | Skip |
| 10th %ile Green (s)     | 44.5  | 54.0  | 103.5 | 0.0   | 0.0   | 0.0   | 0.0  |
| 10th %ile Term Code     | Coord | MaxR  | Coord | Skip  | Skip  | Skip  | Skip |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 100 (91%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

2: I-395 NB Off-Ramp & Seminary Rd (S)

Existing 2010  
PM PEAK

|                     | ↖     | →     | ↘    | ↙    | ←    | ↖    | ↙    | ↑    | ↗     | ↘    | ↓    | ↙    |
|---------------------|-------|-------|------|------|------|------|------|------|-------|------|------|------|
| Lane Group          | EBL   | EBT   | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR   | SBL  | SBT  | SBR  |
| Lane Configurations | ↖ ↗   | ↖ ↗   |      |      |      |      |      | ↑    | ↗     |      |      |      |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           |       | 0%    |      |      | 0%   |      |      | 0%   |       |      | 0%   |      |
| Storage Length (ft) | 0     |       | 0    | 0    |      | 0    | 0    |      | 630   | 0    |      | 0    |
| Storage Lanes       | 1     |       | 0    | 0    |      | 0    | 0    |      | 1     | 0    |      | 0    |
| Taper Length (ft)   | 50    |       |      | 50   |      |      | 50   |      |       | 50   |      |      |
| Lane Util. Factor   | 0.91  | 0.91  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor     |       |       |      |      |      |      |      |      |       |      |      |      |
| Friction            |       |       |      |      |      |      |      |      | 0.850 |      |      |      |
| Flt Protected       | 0.950 | 0.998 |      |      |      |      |      |      | 1863  | 1583 | 0    | 0    |
| Satd. Flow (prot)   | 1610  | 3383  | 0    | 0    | 0    | 0    | 0    | 1863 | 1583  | 0    | 0    | 0    |
| Flt Permitted       | 0.950 | 0.998 |      |      |      |      |      |      |       |      |      |      |
| Satd. Flow (perm)   | 1610  | 3383  | 0    | 0    | 0    | 0    | 0    | 1863 | 1583  | 0    | 0    | 0    |
| Right Turn on Red   | Yes   |       | Yes  |      |      | Yes  |      |      | Yes   |      |      | Yes  |
| Satd. Flow (RTOR)   | 20    | 6     |      |      |      |      |      |      | 162   |      |      |      |
| Link Speed (mph)    |       | 35    |      |      | 35   |      |      |      | 35    |      |      | 35   |
| Link Distance (ft)  |       | 349   |      |      | 315  |      |      |      | 1292  |      |      | 294  |
| Travel Time (s)     |       | 6.8   |      |      | 6.1  |      |      |      | 25.2  |      |      | 5.7  |

Intersection Summary

Area Type: Other

Timings  
2: I-395 NB Off-Ramp & Seminary Rd (S)

Existing 2010  
PM PEAK

| Lane Group           | EBL   | EBT   | NBT   | NBR   | ø2   | ø3   | ø4   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  |       |       |       |       |      |      |      |
| Volume (vph)         | 480   | 975   | 735   | 375   |      |      |      |
| Turn Type            | Perm  | NA    | NA    | Prot  |      |      |      |
| Protected Phases     | 2 3 4 | 1     | 1     | 2     | 3    | 4    |      |
| Permitted Phases     | 2 3 4 |       |       |       |      |      |      |
| Detector Phase       | 2 3 4 | 2 3 4 | 1     | 1     |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  |       |       | 10.0  | 10.0  | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    |       |       | 22.5  | 22.5  | 22.5 | 22.5 | 23.0 |
| Total Split (s)      | 145.0 | 145.0 | 56.5  | 56.5  | 51.5 | 46.5 | 47.0 |
| Total Split (%)      | 72.0% | 72.0% | 28.0% | 28.0% | 26%  | 23%  | 23%  |
| Yellow Time (s)      |       |       | 4.0   | 4.0   | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     |       |       | 2.5   | 2.5   | 2.5  | 2.5  | 3.0  |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | -2.5  |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             |       |       | Lead  | Lead  | Lag  | Lead | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          |       |       | Min   | Min   | Min  | Min  | Min  |
| Act Effct Green (s)  | 141.0 | 141.0 | 52.5  | 52.5  |      |      |      |
| Actuated g/C Ratio   | 0.70  | 0.70  | 0.26  | 0.26  |      |      |      |
| v/c Ratio            | 0.40  | 0.45  | 1.58  | 0.73  |      |      |      |
| Control Delay        | 1.7   | 2.1   | 314.3 | 48.1  |      |      |      |
| Queue Delay          | 1.3   | 0.8   | 0.0   | 0.0   |      |      |      |
| Total Delay          | 3.0   | 2.9   | 314.3 | 48.1  |      |      |      |
| LOS                  | A     | A     | F     | D     |      |      |      |
| Approach Delay       |       | 3.0   | 224.3 |       |      |      |      |
| Approach LOS         |       | A     | F     |       |      |      |      |

Intersection Summary

Cycle Length: 201.5  
 Actuated Cycle Length: 201.5  
 Natural Cycle: 145  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.58  
 Intersection Signal Delay: 98.8  
 Intersection Capacity Utilization 75.0%  
 Analysis Period (min) 15  
 Intersection LOS: F  
 ICU Level of Service D

Splits and Phases: 2: I-395 NB Off-Ramp & Seminary Rd (S)



Phasings  
2: I-395 NB Off-Ramp & Seminary Rd (S)

Existing 2010  
PM PEAK

| Lane Group              | EBL   | EBT   | NBT   | NBR   | ø2   | ø3   | ø4   |
|-------------------------|-------|-------|-------|-------|------|------|------|
| Protected Phases        | 2 3 4 | 1     | 1     | 2     | 3    | 4    |      |
| Permitted Phases        | 2 3 4 |       |       |       |      |      |      |
| Minimum Initial (s)     |       |       | 10.0  | 10.0  | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       |       |       | 22.5  | 22.5  | 22.5 | 22.5 | 23.0 |
| Total Split (s)         | 145.0 | 145.0 | 56.5  | 56.5  | 51.5 | 46.5 | 47.0 |
| Total Split (%)         | 72.0% | 72.0% | 28.0% | 28.0% | 26%  | 23%  | 23%  |
| Maximum Green (s)       |       |       | 50.0  | 50.0  | 45.0 | 40.0 | 40.0 |
| Yellow Time (s)         |       |       | 4.0   | 4.0   | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        |       |       | 2.5   | 2.5   | 2.5  | 2.5  | 3.0  |
| Lead/Lag                |       |       | Lead  | Lead  | Lag  | Lead | Lag  |
| Lead-Lag Optimize?      |       |       |       |       |      |      |      |
| Vehicle Extension (s)   |       |       | 5.0   | 5.0   | 3.0  | 3.0  | 3.0  |
| Minimum Gap (s)         |       |       | 5.0   | 5.0   | 3.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  |       |       | 0.0   | 0.0   | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      |       |       | 0.0   | 0.0   | 0.0  | 0.0  | 0.0  |
| Recall Mode             |       |       | Min   | Min   | Min  | Min  | Min  |
| Walk Time (s)           |       |       |       |       |      |      |      |
| Flash Dont Walk (s)     |       |       |       |       |      |      |      |
| Pedestrian Calls (#/hr) |       |       |       |       |      |      |      |
| 90th %ile Green (s)     |       |       | 50.0  | 50.0  | 45.0 | 40.0 | 40.0 |
| 90th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 70th %ile Green (s)     |       |       | 50.0  | 50.0  | 45.0 | 40.0 | 40.0 |
| 70th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 50th %ile Green (s)     |       |       | 50.0  | 50.0  | 45.0 | 40.0 | 40.0 |
| 50th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 30th %ile Green (s)     |       |       | 50.0  | 50.0  | 45.0 | 40.0 | 40.0 |
| 30th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 10th %ile Green (s)     |       |       | 50.0  | 50.0  | 45.0 | 40.0 | 40.0 |
| 10th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |

Intersection Summary

Cycle Length: 201.5  
 Actuated Cycle Length: 201.5  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 201.5  
 70th %ile Actuated Cycle: 201.5  
 50th %ile Actuated Cycle: 201.5  
 30th %ile Actuated Cycle: 201.5  
 10th %ile Actuated Cycle: 201.5

Lanes and Geometrics  
3: Seminary Rd (S)/Seminary Rd (N) & Seminary Rd

Existing 2010  
PM PEAK

| Lane Group          | EBL  | EBT  | EBR   | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR   |
|---------------------|------|------|-------|------|------|------|------|------|------|------|------|-------|
| Lane Configurations |      | ↑↑   | ↑↑    |      | ↑↑   |      |      |      |      |      |      | ↑     |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12   | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12    |
| Grade (%)           |      | 0%   |       |      | 0%   |      |      | 0%   |      |      | 0%   |       |
| Storage Length (ft) | 0    |      | 0     | 0    |      | 0    | 0    |      | 0    | 0    |      | 0     |
| Storage Lanes       | 0    |      | 2     | 0    |      | 0    | 0    |      | 0    | 0    |      | 1     |
| Taper Length (ft)   | 50   |      |       | 50   |      |      | 50   |      |      | 50   |      |       |
| Lane Util. Factor   | 1.00 | 0.95 | 0.88  | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  |
| Ped Bike Factor     |      |      |       |      |      |      |      |      |      |      |      |       |
| Frt                 |      |      | 0.850 |      |      |      |      |      |      |      |      | 0.865 |
| Flt Protected       |      |      |       |      |      |      |      |      |      |      |      |       |
| Satd. Flow (prot)   | 0    | 3539 | 2787  | 0    | 3539 | 0    | 0    | 0    | 0    | 0    | 0    | 1611  |
| Flt Permitted       |      |      |       |      |      |      |      |      |      |      |      |       |
| Satd. Flow (perm)   | 0    | 3539 | 2787  | 0    | 3539 | 0    | 0    | 0    | 0    | 0    | 0    | 1611  |
| Link Speed (mph)    |      | 35   |       |      | 35   |      |      | 35   |      |      | 35   |       |
| Link Distance (ft)  |      | 489  |       |      | 1551 |      |      | 221  |      |      | 263  |       |
| Travel Time (s)     |      | 9.5  |       |      | 30.2 |      |      | 4.3  |      |      | 5.1  |       |

**Intersection Summary**  
Area Type: Other

Lanes and Geometrics  
7: Beauregard St/S Walter Reed Dr & King St

Existing 2010  
PM PEAK


| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|---------------------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations | ↑     | ↑↑    |      | ↑     | ↑↑    |      |       | ↑↑    | ↑↑   |       | ↑↑    | ↑    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           |       | 0%    |      |       | 0%    |      |       | 0%    |      |       | 0%    |      |
| Storage Length (ft) | 250   |       | 0    | 360   |       | 0    | 515   |       | 0    | 165   |       | 165  |
| Storage Lanes       | 1     |       | 0    | 1     |       | 0    | 2     |       | 0    | 1     |       | 1    |
| Taper Length (ft)   | 50    |       |      | 50    |       |      | 50    |       |      | 50    |       |      |
| Lane Util. Factor   | 1.00  | 0.95  | 0.95 | 1.00  | 0.95  | 0.95 | 0.97  | 0.95  | 0.95 | 1.00  | 0.95  | 1.00 |
| Ped Bike Factor     |       | 1.00  |      |       | 1.00  |      |       | 0.99  |      |       | 0.99  |      |
| Frt                 |       | 0.979 |      |       | 0.987 |      |       | 0.960 |      |       | 0.850 |      |
| Flt Protected       | 0.950 |       |      | 0.950 |       |      | 0.950 |       |      | 0.950 |       |      |
| Satd. Flow (prot)   | 1770  | 3453  | 0    | 1770  | 3484  | 0    | 3433  | 3377  | 0    | 1770  | 3539  | 1583 |
| Flt Permitted       | 0.078 |       |      | 0.078 |       |      | 0.950 |       |      | 0.496 |       |      |
| Satd. Flow (perm)   | 145   | 3453  | 0    | 145   | 3484  | 0    | 3433  | 3377  | 0    | 924   | 3539  | 1561 |
| Right Turn on Red   |       |       | Yes  |       |       | Yes  |       |       | Yes  |       |       | Yes  |
| Satd. Flow (RTOR)   |       | 19    |      |       | 10    |      |       | 43    |      |       |       | 124  |
| Link Speed (mph)    |       | 35    |      |       | 35    |      |       | 35    |      |       | 35    |      |
| Link Distance (ft)  |       | 1357  |      |       | 1477  |      |       | 1463  |      |       | 1148  |      |
| Travel Time (s)     |       | 26.4  |      |       | 28.8  |      |       | 28.5  |      |       | 22.4  |      |

**Intersection Summary**  
Area Type: Other

Timings

7: Beaugard St/S Walter Reed Dr & King St

Existing 2010  
PM PEAK

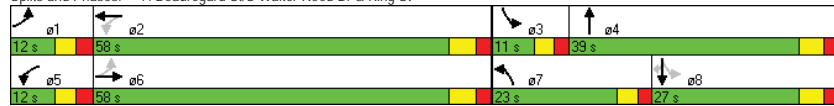


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     |
| Volume (vph)         | 115   | 1495  | 100   | 1090  | 250   | 300   | 185   | 660   | 155   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Prot  | NA    | pm+pt | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases     | 6     |       | 2     |       |       |       | 8     |       | 8     |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 10.0  | 4.0   | 10.0  | 6.5   | 7.0   | 3.5   | 7.0   | 7.0   |
| Minimum Split (s)    | 9.5   | 22.5  | 9.5   | 22.5  | 12.0  | 21.5  | 9.0   | 21.5  | 21.5  |
| Total Split (s)      | 12.0  | 58.0  | 12.0  | 58.0  | 23.0  | 39.0  | 11.0  | 27.0  | 27.0  |
| Total Split (%)      | 10.0% | 48.3% | 10.0% | 48.3% | 19.2% | 32.5% | 9.2%  | 22.5% | 22.5% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.5   | 3.0   | 3.5   | 3.5   |
| All-Red Time (s)     | 2.5   | 2.5   | 2.5   | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.5   | 6.5   | 5.5   | 6.5   | 5.0   | 5.5   | 5.0   | 5.5   | 5.5   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | Max   | None  | Max   | Max   |
| Act Effct Green (s)  | 59.0  | 51.5  | 59.0  | 51.5  | 14.5  | 33.5  | 31.5  | 25.0  | 25.0  |
| Actuated g/C Ratio   | 0.49  | 0.43  | 0.49  | 0.43  | 0.12  | 0.28  | 0.26  | 0.21  | 0.21  |
| v/c Ratio            | 0.78  | 1.25  | 0.68  | 0.85  | 0.65  | 0.45  | 0.70  | 0.96  | 0.39  |
| Control Delay        | 52.2  | 150.8 | 40.2  | 37.4  | 47.5  | 31.2  | 47.7  | 72.9  | 16.1  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 52.2  | 150.8 | 40.2  | 37.4  | 47.5  | 31.2  | 47.7  | 72.9  | 16.1  |
| LOS                  | D     | F     | D     | D     | D     | C     | D     | E     | B     |
| Approach Delay       |       | 144.7 |       | 37.6  |       | 37.4  |       | 59.4  |       |
| Approach LOS         |       | F     |       | D     |       | D     |       | E     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 90 (75%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 130  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.25  
 Intersection Signal Delay: 83.5  
 Intersection LOS: F  
 Intersection Capacity Utilization 98.9%  
 ICU Level of Service F  
 Analysis Period (min) 15


Splits and Phases: 7: Beaugard St/S Walter Reed Dr & King St



Phasings

7: Beaugard St/S Walter Reed Dr & King St

Existing 2010  
PM PEAK



| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL  | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| Protected Phases        | 1     | 6     | 5     | 2     | 7     | 4     | 3    | 8     |       |
| Permitted Phases        | 6     |       | 2     |       |       |       | 8    |       | 8     |
| Minimum Initial (s)     | 4.0   | 10.0  | 4.0   | 10.0  | 6.5   | 7.0   | 3.5  | 7.0   | 7.0   |
| Minimum Split (s)       | 9.5   | 22.5  | 9.5   | 22.5  | 12.0  | 21.5  | 9.0  | 21.5  | 21.5  |
| Total Split (s)         | 12.0  | 58.0  | 12.0  | 58.0  | 23.0  | 39.0  | 11.0 | 27.0  | 27.0  |
| Total Split (%)         | 10.0% | 48.3% | 10.0% | 48.3% | 19.2% | 32.5% | 9.2% | 22.5% | 22.5% |
| Maximum Green (s)       | 6.5   | 51.5  | 6.5   | 51.5  | 18.0  | 33.5  | 6.0  | 21.5  | 21.5  |
| Yellow Time (s)         | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.5   | 3.0  | 3.5   | 3.5   |
| All-Red Time (s)        | 2.5   | 2.5   | 2.5   | 2.5   | 2.0   | 2.0   | 2.0  | 2.0   | 2.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead | Lag   | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |      |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   |
| Recall Mode             | None  | C-Max | None  | C-Max | None  | Max   | None | Max   | Max   |
| Walk Time (s)           | 4.0   |       | 4.0   |       | 4.0   |       | 4.0  |       | 4.0   |
| Flash Dont Walk (s)     |       | 12.0  |       | 12.0  |       | 12.0  |      | 12.0  | 12.0  |
| Pedestrian Calls (#/hr) |       | 0     |       | 0     |       | 0     |      | 0     | 0     |
| 90th %ile Green (s)     | 6.5   | 51.5  | 6.5   | 51.5  | 18.0  | 33.5  | 6.0  | 21.5  | 21.5  |
| 90th %ile Term Code     | Max   | Coord | Max   | Coord | Max   | MaxR  | Max  | MaxR  | MaxR  |
| 70th %ile Green (s)     | 6.5   | 51.5  | 6.5   | 51.5  | 16.2  | 33.5  | 6.0  | 23.3  | 23.3  |
| 70th %ile Term Code     | Max   | Coord | Max   | Coord | Gap   | MaxR  | Max  | MaxR  | MaxR  |
| 50th %ile Green (s)     | 6.5   | 51.5  | 6.5   | 51.5  | 14.6  | 33.5  | 6.0  | 24.9  | 24.9  |
| 50th %ile Term Code     | Max   | Coord | Max   | Coord | Gap   | MaxR  | Max  | MaxR  | MaxR  |
| 30th %ile Green (s)     | 6.5   | 51.5  | 6.5   | 51.5  | 13.0  | 33.5  | 6.0  | 26.5  | 26.5  |
| 30th %ile Term Code     | Max   | Coord | Max   | Coord | Gap   | MaxR  | Max  | MaxR  | MaxR  |
| 10th %ile Green (s)     | 6.5   | 51.5  | 6.5   | 51.5  | 10.7  | 33.5  | 6.0  | 28.8  | 28.8  |
| 10th %ile Term Code     | Max   | Coord | Max   | Coord | Gap   | MaxR  | Max  | MaxR  | MaxR  |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 90 (75%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
9: Beauregard St & Braddock Rd/Braddock Rd

Existing 2010  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR   | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|------|------|-------|-------|-------|-------|------|-------|-------|-------|------|
| Lane Configurations | ↔     | ↕    | ↔    | ↔     | ↕     | ↔     | ↔     | ↕    | ↔     | ↔     | ↕     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12    | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           |       | -6%  |      |       | -4%   |       |       | -2%  |       |       | 2%    |      |
| Storage Length (ft) | 100   |      | 0    | 200   |       | 60    | 80    |      | 100   | 100   |       | 0    |
| Storage Lanes       | 1     |      | 0    | 1     |       | 1     | 1     |      | 1     | 1     |       | 0    |
| Taper Length (ft)   | 50    |      |      | 50    |       |       | 50    |      |       | 50    |       |      |
| Lane Util. Factor   | 1.00  | 0.95 | 0.95 | 0.91  | 0.91  | 1.00  | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 0.95 |
| Ped Bike Factor     | 0.99  |      |      |       |       | 0.97  |       |      | 0.98  |       | 0.99  |      |
| Frt                 | 0.959 |      |      |       |       | 0.850 |       |      | 0.850 |       | 0.980 |      |
| Flt Protected       | 0.950 |      |      | 0.950 | 0.987 |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (prot)   | 1823  | 3473 | 0    | 1643  | 3413  | 1615  | 1787  | 3575 | 1599  | 1752  | 3416  | 0    |
| Flt Permitted       | 0.950 |      |      | 0.950 | 0.987 |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (perm)   | 1823  | 3473 | 0    | 1643  | 3413  | 1574  | 1787  | 3575 | 1569  | 1752  | 3416  | 0    |
| Right Turn on Red   |       |      | Yes  |       |       | Yes   |       | Yes  |       | Yes   |       | Yes  |
| Satd. Flow (RTOR)   |       | 43   |      |       |       | 247   |       |      | 126   |       | 15    |      |
| Link Speed (mph)    | 35    |      |      | 35    |       | 35    |       | 35   |       | 35    |       | 35   |
| Link Distance (ft)  | 755   |      |      | 1885  |       | 1146  |       | 1463 |       | 1463  |       | 1463 |
| Travel Time (s)     | 14.7  |      |      | 36.7  |       | 22.3  |       | 28.5 |       | 28.5  |       | 28.5 |

Intersection Summary

Area Type: Other

Timings  
9: Beauregard St & Braddock Rd/Braddock Rd

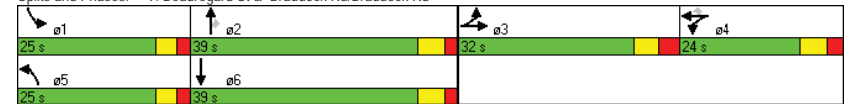
Existing 2010  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↔     | ↔     | ↕     | ↔     | ↔     | ↕     |
| Volume (vph)         | 55    | 105   | 110   | 110   | 230   | 70    | 375   | 120   | 340   | 575   |
| Turn Type            | Split | NA    | Split | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 3     | 3     | 4     | 4     |       | 5     | 2     |       | 1     | 6     |
| Permitted Phases     |       |       |       |       | 4     |       |       | 2     |       |       |
| Detector Phase       | 3     | 3     | 4     | 4     | 4     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 6.0   | 10.0  | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)    | 31.5  | 31.5  | 22.5  | 22.5  | 22.5  | 11.0  | 26.0  | 26.0  | 11.0  | 26.0  |
| Total Split (s)      | 32.0  | 32.0  | 24.0  | 24.0  | 24.0  | 25.0  | 39.0  | 39.0  | 25.0  | 39.0  |
| Total Split (%)      | 26.7% | 26.7% | 20.0% | 20.0% | 20.0% | 20.8% | 32.5% | 32.5% | 20.8% | 32.5% |
| Yellow Time (s)      | 3.5   | 3.5   | 4.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 2.5   | 2.5   | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | -2.5  | 0.0   | -1.0  | -2.0  | 0.0   | -1.0  | -2.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 6.5   | 4.0   | 6.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lead  | Lag   | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |
| Act Effct Green (s)  | 14.0  | 14.0  | 13.2  | 13.2  | 10.7  | 11.5  | 55.8  | 53.8  | 21.0  | 67.6  |
| Actuated g/C Ratio   | 0.12  | 0.12  | 0.11  | 0.11  | 0.09  | 0.10  | 0.46  | 0.45  | 0.18  | 0.56  |
| v/c Ratio            | 0.28  | 0.35  | 0.43  | 0.42  | 0.68  | 0.44  | 0.24  | 0.17  | 1.19  | 0.37  |
| Control Delay        | 49.2  | 35.8  | 56.2  | 52.6  | 15.9  | 62.6  | 15.1  | 2.4   | 145.7 | 10.7  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 49.2  | 35.8  | 56.2  | 52.6  | 15.9  | 62.6  | 15.1  | 2.4   | 145.7 | 10.7  |
| LOS                  | D     | D     | E     | D     | B     | E     | B     | A     | F     | B     |
| Approach Delay       |       | 39.5  |       | 34.4  |       |       | 18.3  |       |       | 56.4  |
| Approach LOS         |       | D     |       | C     |       |       | B     |       |       | E     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 48 (40%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 105  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.19  
 Intersection Signal Delay: 40.7  
 Intersection LOS: D  
 Intersection Capacity Utilization 65.4%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 9: Beauregard St & Braddock Rd/Braddock Rd





Phasings

9: Beauregard St & Braddock Rd/Braddock Rd

Existing 2010  
PM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 3     | 3     | 4     | 4     |       | 5     | 2     |       | 1     | 6     |
| Permitted Phases        |       |       |       |       | 4     |       |       | 2     |       |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 6.0   | 10.0  | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)       | 31.5  | 31.5  | 22.5  | 22.5  | 22.5  | 11.0  | 26.0  | 26.0  | 11.0  | 26.0  |
| Total Split (s)         | 32.0  | 32.0  | 24.0  | 24.0  | 24.0  | 25.0  | 39.0  | 39.0  | 25.0  | 39.0  |
| Total Split (%)         | 26.7% | 26.7% | 20.0% | 20.0% | 20.0% | 20.8% | 32.5% | 32.5% | 20.8% | 32.5% |
| Maximum Green (s)       | 25.5  | 25.5  | 17.5  | 17.5  | 17.5  | 20.0  | 33.0  | 33.0  | 20.0  | 33.0  |
| Yellow Time (s)         | 3.5   | 3.5   | 4.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 2.5   | 2.5   | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead  | Lead  | Lag   | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 3.0   | 0.2   | 0.2   | 3.0   | 0.2   |
| Minimum Gap (s)         | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 3.0   | 0.2   | 0.2   | 3.0   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 4.0   | 4.0   | 4.0   | 7.0   | 7.0   |       | 7.0   | 7.0   |
| Flash Dont Walk (s)     | 18.0  | 18.0  | 12.0  | 12.0  | 12.0  |       | 13.0  | 13.0  |       | 13.0  |
| Pedestrian Calls (#/hr) | 5     | 5     | 5     | 5     | 5     |       | 5     | 5     |       | 5     |
| 90th %ile Green (s)     | 25.0  | 25.0  | 16.0  | 16.0  | 16.0  | 14.5  | 35.0  | 35.0  | 20.0  | 40.5  |
| 90th %ile Term Code     | Ped   | Ped   | Ped   | Ped   | Ped   | Gap   | Coord | Coord | Max   | Coord |
| 70th %ile Green (s)     | 9.8   | 9.8   | 11.8  | 11.8  | 11.8  | 12.1  | 54.4  | 54.4  | 20.0  | 62.3  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Coord | Max   | Coord |
| 50th %ile Green (s)     | 8.5   | 8.5   | 10.0  | 10.0  | 10.0  | 10.5  | 57.5  | 57.5  | 20.0  | 67.0  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Coord | Max   | Coord |
| 30th %ile Green (s)     | 7.2   | 7.2   | 8.7   | 8.7   | 8.7   | 8.8   | 60.1  | 60.1  | 20.0  | 71.3  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Coord | Max   | Coord |
| 10th %ile Green (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 0.0   | 62.0  | 62.0  | 20.0  | 87.0  |
| 10th %ile Term Code     | Min   | Min   | Min   | Min   | Min   | Skip  | Coord | Coord | Max   | Coord |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 48 (40%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

10: Beauregard St & Fillmore Ave

Existing 2010  
PM PEAK

| Lane Group          | EBL  | EBT   | EBR   | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT  | SBR   |
|---------------------|------|-------|-------|-------|-------|------|-------|-------|------|-------|------|-------|
| Lane Configurations |      | ↔     | ↔     | ↔     | ↔     | ↔    | ↔     | ↔     | ↔    | ↔     | ↔    | ↔     |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12    | 12    | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12   | 12    |
| Grade (%)           |      | -3%   |       |       | -3%   |      |       | -4%   |      |       | 3%   |       |
| Storage Length (ft) | 0    |       | 150   | 0     |       | 0    | 200   |       | 0    | 75    |      | 0     |
| Storage Lanes       | 0    |       | 1     | 1     |       | 0    | 1     |       | 0    | 1     |      | 0     |
| Taper Length (ft)   | 50   |       |       | 50    |       |      | 50    |       |      | 50    |      |       |
| 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     |      |       | 0.99  |       | 0.99  |      |       | 1.00  |      |       |      | 1.00  |
| Frt                 |      |       | 0.850 |       | 0.888 |      |       | 0.988 |      |       |      | 0.986 |
| Flt Protected       |      | 0.958 |       | 0.950 |       |      | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (prot)   | 0    | 1811  | 1607  | 1796  | 1661  | 0    | 1805  | 3561  | 0    | 1743  | 3427 | 0     |
| Flt Permitted       |      | 0.719 |       | 0.630 |       |      | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (perm)   | 0    | 1359  | 1586  | 1191  | 1661  | 0    | 1805  | 3561  | 0    | 1743  | 3427 | 0     |
| Right Turn on Red   |      |       | Yes   |       |       | Yes  |       | Yes   |      | Yes   |      | Yes   |
| Satd. Flow (RTOR)   |      |       | 129   |       | 32    |      |       | 10    |      |       |      | 12    |
| Link Speed (mph)    |      | 25    |       |       | 25    |      |       | 35    |      |       |      | 35    |
| Link Distance (ft)  |      | 778   |       |       | 309   |      |       | 1416  |      |       |      | 1146  |
| Travel Time (s)     |      | 21.2  |       |       | 8.4   |      |       | 27.6  |      |       |      | 22.3  |

Intersection Summary

Area Type: Other

Timings  
10: Beauregard St & Fillmore Ave

Existing 2010  
PM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |
| Volume (vph)         | 80    | 10    | 120   | 55    | 10    | 60    | 455   | 20    | 640   |
| Turn Type            | Perm  | NA    | pm+ov | Perm  | NA    | Prot  | NA    | Prot  | NA    |
| Protected Phases     |       | 4     | 5     |       | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       |       | 4     |       |       |       |       |       |
| Detector Phase       | 4     | 4     | 5     | 4     | 4     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 14.0  | 14.0  | 6.0   | 14.0  | 14.0  | 6.0   | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)    | 33.0  | 33.0  | 11.0  | 33.0  | 33.0  | 11.0  | 16.0  | 11.0  | 16.0  |
| Total Split (s)      | 34.0  | 34.0  | 25.0  | 34.0  | 34.0  | 25.0  | 61.0  | 25.0  | 61.0  |
| Total Split (%)      | 28.3% | 28.3% | 20.8% | 28.3% | 28.3% | 20.8% | 50.8% | 20.8% | 50.8% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.0  | -2.0  | -1.0  | -2.0  | -2.0  | -1.0  | -2.0  | -1.0  | -2.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             |       |       | Lead  |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |       |
| Act Effct Green (s)  | 18.9  | 28.9  | 18.9  | 18.9  | 10.0  | 85.9  | 7.6   | 79.1  |       |
| Actuated g/C Ratio   | 0.16  | 0.24  | 0.16  | 0.16  | 0.08  | 0.72  | 0.06  | 0.66  |       |
| v/c Ratio            | 0.46  | 0.27  | 0.32  | 0.15  | 0.43  | 0.21  | 0.20  | 0.33  |       |
| Control Delay        | 51.9  | 6.0   | 48.0  | 18.9  | 80.9  | 3.9   | 65.4  | 5.4   |       |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Total Delay          | 51.9  | 6.0   | 48.0  | 18.9  | 80.9  | 3.9   | 65.4  | 5.4   |       |
| LOS                  | D     | A     | D     | B     | F     | A     | E     | A     |       |
| Approach Delay       | 25.7  |       |       | 35.7  |       | 12.3  |       | 7.1   |       |
| Approach LOS         | C     |       |       | D     |       | B     |       | A     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 54 (45%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.46  
 Intersection Signal Delay: 13.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 49.8%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 10: Beauregard St & Fillmore Ave



Phasings  
10: Beauregard St & Fillmore Ave

Existing 2010  
PM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 4     | 5     |       | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases        | 4     |       |       | 4     |       |       |       |       |       |
| Minimum Initial (s)     | 14.0  | 14.0  | 6.0   | 14.0  | 14.0  | 6.0   | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)       | 33.0  | 33.0  | 11.0  | 33.0  | 33.0  | 11.0  | 16.0  | 11.0  | 16.0  |
| Total Split (s)         | 34.0  | 34.0  | 25.0  | 34.0  | 34.0  | 25.0  | 61.0  | 25.0  | 61.0  |
| Total Split (%)         | 28.3% | 28.3% | 20.8% | 28.3% | 28.3% | 20.8% | 50.8% | 20.8% | 50.8% |
| Maximum Green (s)       | 28.0  | 28.0  | 20.0  | 28.0  | 28.0  | 20.0  | 55.0  | 20.0  | 55.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       | Lead  |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.2   | 2.0   | 0.2   |
| Minimum Gap (s)         | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.2   | 2.0   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Walk Time (s)           | 4.0   | 4.0   |       | 4.0   | 4.0   |       |       |       |       |
| Flash Dont Walk (s)     | 23.0  | 23.0  |       | 23.0  | 23.0  |       |       |       |       |
| Pedestrian Calls (#/hr) | 5     | 5     |       | 5     | 5     |       |       |       |       |
| 90th %ile Green (s)     | 27.0  | 27.0  | 12.6  | 27.0  | 27.0  | 12.6  | 67.7  | 8.3   | 63.4  |
| 90th %ile Term Code     | Ped   | Ped   | Gap   | Ped   | Ped   | Gap   | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 15.3  | 15.3  | 10.3  | 15.3  | 15.3  | 10.3  | 80.8  | 6.9   | 77.4  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 14.0  | 14.0  | 8.8   | 14.0  | 14.0  | 8.8   | 83.0  | 6.0   | 80.2  |
| 50th %ile Term Code     | Min   | Min   | Gap   | Min   | Min   | Gap   | Coord | Min   | Coord |
| 30th %ile Green (s)     | 14.0  | 14.0  | 7.3   | 14.0  | 14.0  | 7.3   | 94.0  | 0.0   | 81.7  |
| 30th %ile Term Code     | Min   | Min   | Gap   | Min   | Min   | Gap   | Coord | Skip  | Coord |
| 10th %ile Green (s)     | 14.0  | 14.0  | 6.0   | 14.0  | 14.0  | 6.0   | 94.0  | 0.0   | 83.0  |
| 10th %ile Term Code     | Min   | Min   | Min   | Min   | Min   | Min   | Coord | Skip  | Coord |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 54 (45%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

11: Mark Center Dr/Mark Center Dr / Southern Towers & Seminary Rd

Existing 2010  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
|---------------------|-------|------|-------|-------|-------|------|------|-------|-------|-------|-------|-------|
| Lane Configurations | ↔     | ↔↔↔  | ↔     | ↔     | ↔↔↔   | ↔    | ↔    | ↔     | ↔     | ↔     | ↔     | ↔     |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12   | 12    | 12    | 12    | 12    | 12    |
| Grade (%)           |       | 0%   |       |       | -1%   |      |      | 0%    |       |       | 0%    |       |
| Storage Length (ft) | 225   |      | 0     | 210   |       | 0    | 0    |       | 200   | 0     |       | 0     |
| Storage Lanes       | 1     |      | 1     | 1     |       | 0    | 0    |       | 1     | 1     |       | 1     |
| Taper Length (ft)   | 50    |      |       | 50    |       |      | 50   |       | 50    |       |       | 50    |
| Lane Util. Factor   | 1.00  | 0.91 | 1.00  | 1.00  | 0.91  | 0.91 | 1.00 | 1.00  | 0.88  | 0.95  | 0.95  | 1.00  |
| Ped Bike Factor     |       |      |       |       | 1.00  |      |      |       |       |       |       |       |
| Frt                 |       |      | 0.850 |       | 0.991 |      |      |       | 0.850 |       |       | 0.850 |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      |      | 0.970 |       | 0.950 | 0.957 |       |
| Satd. Flow (prot)   | 1770  | 5085 | 1583  | 1778  | 5060  | 0    | 0    | 1807  | 2787  | 1681  | 1694  | 1583  |
| Flt Permitted       | 0.950 |      |       | 0.950 |       |      |      | 0.970 |       | 0.950 | 0.957 |       |
| Satd. Flow (perm)   | 1770  | 5085 | 1583  | 1778  | 5060  | 0    | 0    | 1807  | 2787  | 1681  | 1694  | 1583  |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |      | Yes   |       | Yes   |       | Yes   |
| Satd. Flow (RTOR)   |       |      | 13    |       | 11    |      |      | 128   |       |       |       | 75    |
| Link Speed (mph)    |       | 35   |       |       | 35    |      |      | 25    |       |       |       | 25    |
| Link Distance (ft)  |       | 737  |       |       | 489   |      |      | 756   |       |       |       | 642   |
| Travel Time (s)     |       | 14.4 |       |       | 9.5   |      |      | 20.6  |       |       |       | 17.5  |

Intersection Summary

Area Type: Other

Timings

11: Mark Center Dr/Mark Center Dr / Southern Towers & Seminary Rd

Existing 2010  
PM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔↔   | ↔     | ↔     | ↔↔↔   | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 35    | 1745  | 25    | 130   | 1500  | 50    | 505   | 185   | 10    | 70    |
| Turn Type            | Prot  | NA    | Free  | Prot  | NA    | NA    | pm+ov | Split | NA    | Perm  |
| Protected Phases     | 1     | 6     |       | 5     | 2     | 4     | 5     | 3     | 3     |       |
| Permitted Phases     |       |       | Free  |       |       | 4     | 4     |       |       | 3     |
| Detector Phase       | 1     | 6     |       | 5     | 2     | 4     | 5     | 3     | 3     | 3     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 10.0  |       | 4.0   | 10.0  | 7.0   | 4.0   | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)    | 9.5   | 16.5  |       | 9.5   | 25.5  | 13.0  | 9.5   | 24.5  | 24.5  | 24.5  |
| Total Split (s)      | 20.0  | 55.0  | 0.0   | 20.0  | 55.0  | 20.0  | 20.0  | 25.0  | 25.0  | 25.0  |
| Total Split (%)      | 16.7% | 45.8% | 0.0%  | 16.7% | 45.8% | 16.7% | 16.7% | 20.8% | 20.8% | 20.8% |
| Yellow Time (s)      | 3.0   | 4.0   |       | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.5   | 2.5   |       | 2.5   | 2.5   | 3.0   | 2.5   | 2.5   | 2.5   | 2.5   |
| Lost Time Adjust (s) | -1.5  | -2.5  | 0.0   | -1.5  | -2.5  | -2.0  | -1.5  | -1.5  | -1.5  | -1.5  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   | Lag   | Lead  | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Max |       | None  | C-Max | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 8.7   | 61.2  | 120.0 | 14.0  | 70.8  | 14.3  | 32.3  | 14.5  | 14.5  | 14.5  |
| Actuated g/C Ratio   | 0.07  | 0.51  | 1.00  | 0.12  | 0.59  | 0.12  | 0.27  | 0.12  | 0.12  | 0.12  |
| v/c Ratio            | 0.30  | 0.72  | 0.02  | 0.67  | 0.58  | 0.65  | 0.64  | 0.52  | 0.51  | 0.29  |
| Control Delay        | 56.9  | 15.7  | 0.0   | 66.7  | 18.2  | 64.7  | 32.4  | 57.9  | 57.7  | 12.9  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 56.9  | 15.7  | 0.0   | 66.7  | 18.2  | 64.7  | 32.4  | 57.9  | 57.7  | 12.9  |
| LOS                  | E     | B     | A     | E     | B     | E     | C     | E     | E     | B     |
| Approach Delay       |       | 16.3  |       |       | 21.8  | 39.0  |       |       |       | 46.0  |
| Approach LOS         |       | B     |       |       | C     | D     |       |       |       | D     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 69 (58%), Referenced to phase 2:WBT and 6:EBT, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.72  
 Intersection Signal Delay: 23.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 69.7%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 11: Mark Center Dr/Mark Center Dr / Southern Towers & Seminary Rd



Phasings

11: Mark Center Dr/Mark Center Dr / Southern Towers & Seminary Rd

Existing 2010

PM PEAK

| Lane Group              | EBL   | EBT   | EBR  | WBL   | WBT   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 1     | 6     |      | 5     | 2     | 4     | 5     | 3     | 3     |       |
| Permitted Phases        |       |       | Free |       |       | 4     | 4     |       |       | 3     |
| Minimum Initial (s)     | 4.0   | 10.0  |      | 4.0   | 10.0  | 7.0   | 4.0   | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 9.5   | 16.5  |      | 9.5   | 25.5  | 13.0  | 9.5   | 24.5  | 24.5  | 24.5  |
| Total Split (s)         | 20.0  | 55.0  | 0.0  | 20.0  | 55.0  | 20.0  | 20.0  | 25.0  | 25.0  | 25.0  |
| Total Split (%)         | 16.7% | 45.8% | 0.0% | 16.7% | 45.8% | 16.7% | 16.7% | 20.8% | 20.8% | 20.8% |
| Maximum Green (s)       | 14.5  | 48.5  |      | 14.5  | 48.5  | 14.0  | 14.5  | 19.5  | 19.5  | 19.5  |
| Yellow Time (s)         | 3.0   | 4.0   |      | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.5   | 2.5   |      | 2.5   | 2.5   | 3.0   | 2.5   | 2.5   | 2.5   | 2.5   |
| Lead/Lag                | Lead  | Lag   |      | Lead  | Lag   | Lag   | Lead  | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?      |       |       |      |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 0.2   |      | 2.0   | 0.2   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Minimum Gap (s)         | 2.0   | 0.2   |      | 2.0   | 0.2   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 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)     |       |       |      |       | 12.0  |       |       | 12.0  | 12.0  | 12.0  |
| Pedestrian Calls (#/hr) |       |       |      |       | 5     |       |       | 5     | 5     | 5     |
| 90th %ile Green (s)     | 10.0  | 49.0  |      | 14.5  | 53.5  | 14.0  | 14.5  | 19.0  | 19.0  | 19.0  |
| 90th %ile Term Code     | Gap   | Coord |      | Max   | Coord | Max   | Max   | Ped   | Ped   | Ped   |
| 70th %ile Green (s)     | 8.3   | 54.0  |      | 14.5  | 60.2  | 14.0  | 14.5  | 14.0  | 14.0  | 14.0  |
| 70th %ile Term Code     | Gap   | Coord |      | Max   | Coord | Max   | Max   | Gap   | Gap   | Gap   |
| 50th %ile Green (s)     | 7.1   | 57.0  |      | 13.8  | 63.7  | 13.7  | 13.8  | 12.0  | 12.0  | 12.0  |
| 50th %ile Term Code     | Gap   | Coord |      | Gap   | Coord | Gap   | Gap   | Gap   | Gap   | Gap   |
| 30th %ile Green (s)     | 0.0   | 63.4  |      | 11.6  | 80.5  | 11.5  | 11.6  | 10.0  | 10.0  | 10.0  |
| 30th %ile Term Code     | Skip  | Coord |      | Gap   | Coord | Gap   | Min   | Min   | Min   | Min   |
| 10th %ile Green (s)     | 0.0   | 69.9  |      | 8.3   | 83.7  | 8.3   | 8.3   | 10.0  | 10.0  | 10.0  |
| 10th %ile Term Code     | Skip  | Coord |      | Gap   | Coord | Gap   | Min   | Min   | Min   | Min   |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 69 (58%), Referenced to phase 2:WBT and 6:EBT, Start of Green

Control Type: Actuated-Coordinated

Lanes and Geometrics

12: Beauregard St & Seminary Rd

Existing 2010

PM PEAK

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT  | WBR   | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  | SBR  |
|---------------------|-------|-------|------|-------|------|-------|-------|------|-------|-------|-------|------|------|
| Lane Configurations |       |       |      |       |      |       |       |      |       |       |       |      |      |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12   | 12   |
| Grade (%)           |       | -1%   |      |       | -1%  |       |       | 0%   |       |       |       |      | 2%   |
| Storage Length (ft) | 150   |       | 300  | 250   |      | 80    | 200   |      | 245   | 170   |       |      | 0    |
| Storage Lanes       | 1     |       | 1    | 1     |      | 1     | 1     |      | 1     | 1     |       |      | 0    |
| Taper Length (ft)   | 50    |       |      | 50    |      |       | 50    |      |       | 50    |       |      |      |
| Lane Util. Factor   | 1.00  | 0.91  | 0.91 | 0.97  | 0.95 | 1.00  | 0.97  | 0.95 | 1.00  | 1.00  | 0.95  | 0.95 | 0.95 |
| Ped Bike Factor     |       |       |      |       |      | 0.98  |       |      | 0.98  |       | 1.00  |      |      |
| Frt                 |       | 0.950 |      |       |      | 0.850 |       |      | 0.850 |       | 0.986 |      |      |
| Flt Protected       | 0.950 |       |      | 0.950 |      |       | 0.950 |      |       | 0.950 |       |      |      |
| Satd. Flow (prot)   | 1778  | 4855  | 0    | 3450  | 3557 | 1591  | 3433  | 3539 | 1583  | 1752  | 3447  |      | 0    |
| Flt Permitted       | 0.950 |       |      | 0.950 |      |       | 0.950 |      |       | 0.950 |       |      |      |
| Satd. Flow (perm)   | 1778  | 4855  | 0    | 3450  | 3557 | 1561  | 3433  | 3539 | 1560  | 1752  | 3447  |      | 0    |
| Right Turn on Red   |       |       | Yes  |       |      | Yes   |       |      | Yes   |       |       |      | Yes  |
| Satd. Flow (RTOR)   |       | 120   |      |       |      | 60    |       |      | 268   |       |       |      | 9    |
| Link Speed (mph)    |       | 35    |      |       |      | 35    |       |      | 35    |       |       |      | 35   |
| Link Distance (ft)  |       | 1256  |      |       |      | 737   |       |      | 824   |       |       |      | 1416 |
| Travel Time (s)     |       | 24.5  |      |       |      | 14.4  |       |      | 16.1  |       |       |      | 27.6 |

Intersection Summary

Area Type: Other

**Timings**  
12: Beauregard St & Seminary Rd

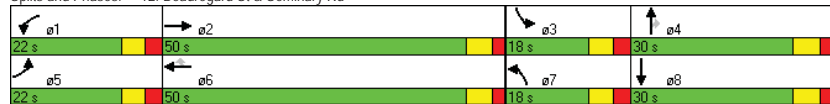
Existing 2010  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 70    | 1265  | 450   | 1035  | 165   | 320   | 320   | 360   | 180   | 575   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     |       | 7     | 4     |       | 3     | 8     |
| Permitted Phases     |       |       |       |       | 6     |       |       | 4     |       |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 6     | 7     | 4     | 4     | 3     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 6.0   | 10.0  | 6.0   | 10.0  | 10.0  | 6.0   | 7.0   | 7.0   | 6.0   | 7.0   |
| Minimum Split (s)    | 12.0  | 16.0  | 12.0  | 16.0  | 16.0  | 12.0  | 13.5  | 13.5  | 12.0  | 13.5  |
| Total Split (s)      | 22.0  | 50.0  | 22.0  | 50.0  | 50.0  | 18.0  | 30.0  | 30.0  | 18.0  | 30.0  |
| Total Split (%)      | 18.3% | 41.7% | 18.3% | 41.7% | 41.7% | 15.0% | 25.0% | 25.0% | 15.0% | 25.0% |
| Yellow Time (s)      | 3.5   | 4.0   | 3.5   | 4.0   | 4.0   | 3.5   | 4.0   | 4.0   | 3.5   | 4.0   |
| All-Red Time (s)     | 2.5   | 2.0   | 2.5   | 2.0   | 2.0   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   |
| Lost Time Adjust (s) | -2.0  | -2.0  | -2.0  | -2.0  | 0.0   | -2.0  | -2.5  | 0.0   | -2.0  | -5.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 6.0   | 4.0   | 4.0   | 6.5   | 4.0   | 1.5   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Max | None  | C-Max | C-Max | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 10.9  | 46.4  | 18.0  | 55.9  | 53.9  | 14.0  | 25.6  | 23.1  | 14.0  | 28.1  |
| Actuated g/C Ratio   | 0.09  | 0.39  | 0.15  | 0.47  | 0.45  | 0.12  | 0.21  | 0.19  | 0.12  | 0.23  |
| v/c Ratio            | 0.46  | 1.04  | 0.93  | 0.67  | 0.24  | 0.86  | 0.46  | 0.75  | 0.95  | 0.84  |
| Control Delay        | 35.6  | 73.6  | 86.7  | 17.7  | 10.4  | 74.4  | 50.7  | 36.7  | 97.0  | 59.9  |
| Queue Delay          | 0.0   | 2.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 35.6  | 75.6  | 86.7  | 17.7  | 10.4  | 74.4  | 50.7  | 36.7  | 97.0  | 59.9  |
| LOS                  | D     | E     | F     | B     | B     | E     | D     | D     | F     | E     |
| Approach Delay       |       | 74.2  |       | 35.8  |       |       | 53.3  |       |       | 68.1  |
| Approach LOS         |       | E     |       | D     |       |       | D     |       |       | E     |

**Intersection Summary**

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 64 (53%), Referenced to phase 2:EBT and 6:WBT, Start of Green  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.04  
 Intersection Signal Delay: 57.7  
 Intersection LOS: E  
 Intersection Capacity Utilization 91.6%  
 ICU Level of Service F  
 Analysis Period (min) 15

**Splits and Phases: 12: Beauregard St & Seminary Rd**



**Phasings**  
12: Beauregard St & Seminary Rd

Existing 2010  
PM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 5     | 2     | 1     | 6     |       | 7     | 4     |       | 3     | 8     |
| Permitted Phases        |       |       |       |       | 6     |       |       | 4     |       |       |
| Minimum Initial (s)     | 6.0   | 10.0  | 6.0   | 10.0  | 10.0  | 6.0   | 7.0   | 7.0   | 6.0   | 7.0   |
| Minimum Split (s)       | 12.0  | 16.0  | 12.0  | 16.0  | 16.0  | 12.0  | 13.5  | 13.5  | 12.0  | 13.5  |
| Total Split (s)         | 22.0  | 50.0  | 22.0  | 50.0  | 50.0  | 18.0  | 30.0  | 30.0  | 18.0  | 30.0  |
| Total Split (%)         | 18.3% | 41.7% | 18.3% | 41.7% | 41.7% | 15.0% | 25.0% | 25.0% | 15.0% | 25.0% |
| Maximum Green (s)       | 16.0  | 44.0  | 16.0  | 44.0  | 44.0  | 12.0  | 23.5  | 23.5  | 12.0  | 23.5  |
| Yellow Time (s)         | 3.5   | 4.0   | 3.5   | 4.0   | 4.0   | 3.5   | 4.0   | 4.0   | 3.5   | 4.0   |
| All-Red Time (s)        | 2.5   | 2.0   | 2.5   | 2.0   | 2.0   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 1.0   | 0.2   | 2.0   | 0.2   | 0.2   | 1.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Minimum Gap (s)         | 1.0   | 0.2   | 2.0   | 0.2   | 0.2   | 1.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | C-Max | None  | C-Max | C-Max | None  | None  | None  | None  | None  |
| Walk Time (s)           |       |       |       |       |       |       |       |       |       |       |
| Flash Dont Walk (s)     |       |       |       |       |       |       |       |       |       |       |
| Pedestrian Calls (#/hr) |       |       |       |       |       |       |       |       |       |       |
| 90th %ile Green (s)     | 12.7  | 44.0  | 16.0  | 47.3  | 47.3  | 12.0  | 23.5  | 23.5  | 12.0  | 23.5  |
| 90th %ile Term Code     | Gap   | Coord | Max   | Coord | Coord | Max   | Max   | Max   | Max   | Max   |
| 70th %ile Green (s)     | 10.3  | 44.0  | 16.0  | 49.7  | 49.7  | 12.0  | 23.5  | 23.5  | 12.0  | 23.5  |
| 70th %ile Term Code     | Gap   | Coord | Max   | Coord | Coord | Max   | Hold  | Hold  | Max   | Max   |
| 50th %ile Green (s)     | 8.6   | 44.0  | 16.0  | 51.4  | 51.4  | 12.0  | 23.5  | 23.5  | 12.0  | 23.5  |
| 50th %ile Term Code     | Gap   | Coord | Max   | Coord | Coord | Max   | Hold  | Hold  | Max   | Max   |
| 30th %ile Green (s)     | 6.9   | 44.0  | 16.0  | 53.1  | 53.1  | 12.0  | 23.5  | 23.5  | 12.0  | 23.5  |
| 30th %ile Term Code     | Gap   | Coord | Max   | Coord | Coord | Max   | Hold  | Hold  | Max   | Max   |
| 10th %ile Green (s)     | 0.0   | 46.0  | 16.0  | 68.0  | 68.0  | 11.8  | 21.5  | 21.5  | 12.0  | 21.7  |
| 10th %ile Term Code     | Skip  | Coord | Max   | Coord | Coord | Gap   | Hold  | Hold  | Max   | Gap   |

**Intersection Summary**

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 64 (53%), Referenced to phase 2:EBT and 6:WBT, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
13: Echols Ave & Seminary Rd

Existing 2010  
PM PEAK

| Lane Group          | EBL  | EBT   | EBR  | WBL  | WBT   | WBR  | NBL  | NBT   | NBR  | SBL  | SBT   | SBR  |
|---------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Lane Configurations |      | ↔     |      |      | ↔     |      |      | ↔     |      |      | ↔     |      |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12   |
| Grade (%)           |      | -1%   |      |      | 1%    |      |      | 0%    |      |      | 0%    |      |
| Storage Length (ft) | 0    |       | 0    | 0    |       | 0    | 0    |       | 0    | 0    |       | 0    |
| Storage Lanes       | 0    |       | 0    | 0    |       | 0    | 0    |       | 0    | 0    |       | 0    |
| Taper Length (ft)   | 50   |       |      | 50   |       |      | 50   |       |      | 50   |       |      |
| Lane Util. Factor   | 0.95 | 0.95  | 0.95 | 0.95 | 0.95  | 0.95 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 |
| Ped Bike Factor     |      |       |      |      |       |      |      | 0.98  |      |      |       |      |
| Frt                 |      |       |      |      | 0.998 |      |      | 0.888 |      |      | 0.958 |      |
| Flt Protected       |      |       |      |      | 0.997 |      |      | 0.992 |      |      | 0.967 |      |
| Satd. Flow (prot)   | 0    | 3557  | 0    | 0    | 3504  | 0    | 0    | 1607  | 0    | 0    | 1726  | 0    |
| Flt Permitted       |      | 0.950 |      |      | 0.537 |      |      | 0.992 |      |      | 0.967 |      |
| Satd. Flow (perm)   | 0    | 3379  | 0    | 0    | 1887  | 0    | 0    | 1607  | 0    | 0    | 1726  | 0    |
| Right Turn on Red   |      |       | Yes  |      |       | Yes  |      |       | Yes  |      |       | Yes  |
| Satd. Flow (RTOR)   |      |       |      |      | 1     |      |      | 54    |      |      | 5     |      |
| Link Speed (mph)    |      | 35    |      |      | 35    |      |      | 25    |      |      | 25    |      |
| Link Distance (ft)  |      | 1011  |      |      | 1256  |      |      | 653   |      |      | 530   |      |
| Travel Time (s)     |      | 19.7  |      |      | 24.5  |      |      | 17.8  |      |      | 14.5  |      |

Intersection Summary

Area Type: Other

Timings  
13: Echols Ave & Seminary Rd

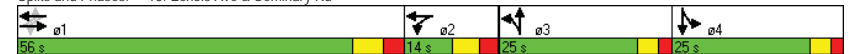
Existing 2010  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBT   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       | ↔     |       | ↔     | ↔     | ↔     |
| Volume (vph)         | 5     | 1900  | 80    | 1320  | 0     | 0     |
| Turn Type            | Perm  | NA    | pm+pt | NA    | NA    | NA    |
| Protected Phases     |       | 1     | 2     | 1.2   | 3     | 4     |
| Permitted Phases     | 1     | 1     | 1.2   |       |       |       |
| Detector Phase       | 1     | 1     | 2     | 1.2   | 3     | 4     |
| Switch Phase         |       |       |       |       |       |       |
| Minimum Initial (s)  | 10.0  | 10.0  | 6.0   |       | 7.0   | 7.0   |
| Minimum Split (s)    | 23.5  | 23.5  | 13.0  |       | 24.0  | 24.0  |
| Total Split (s)      | 56.0  | 56.0  | 14.0  | 70.0  | 25.0  | 25.0  |
| Total Split (%)      | 46.7% | 46.7% | 11.7% | 58.3% | 20.8% | 20.8% |
| Yellow Time (s)      | 4.5   | 4.5   | 4.0   |       | 3.0   | 3.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   |       | 2.0   | 2.0   |
| Lost Time Adjust (s) | -3.5  | -3.5  | -3.0  | -3.5  | -1.0  | -1.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lead  | Lag   |       | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |
| Recall Mode          | C-Max | C-Max | None  |       | None  | None  |
| Act Effct Green (s)  |       | 82.3  |       | 92.3  | 10.9  | 10.4  |
| Actuated g/C Ratio   |       | 0.69  |       | 0.77  | 0.09  | 0.09  |
| v/c Ratio            |       | 0.88  |       | 0.96  | 0.33  | 0.10  |
| Control Delay        |       | 16.2  |       | 28.9  | 20.8  | 38.9  |
| Queue Delay          |       | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Total Delay          |       | 16.2  |       | 28.9  | 20.8  | 38.9  |
| LOS                  |       | B     |       | C     | C     | D     |
| Approach Delay       |       | 16.2  |       | 28.9  | 20.8  | 38.9  |
| Approach LOS         |       | B     |       | C     | C     | D     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 96 (80%), Referenced to phase 1:EBWB, Start of Green  
 Natural Cycle: 145  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.96  
 Intersection Signal Delay: 21.7  
 Intersection LOS: C  
 Intersection Capacity Utilization 109.9%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 13: Echols Ave & Seminary Rd



Phasings  
13: Echols Ave & Seminary Rd

Existing 2010  
PM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBT   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 1     | 2     | 1 2   | 3     | 4     |
| Permitted Phases        | 1     | 1     | 1 2   |       |       |       |
| Minimum Initial (s)     | 10.0  | 10.0  | 6.0   |       | 7.0   | 7.0   |
| Minimum Split (s)       | 23.5  | 23.5  | 13.0  |       | 24.0  | 24.0  |
| Total Split (s)         | 56.0  | 56.0  | 14.0  | 70.0  | 25.0  | 25.0  |
| Total Split (%)         | 46.7% | 46.7% | 11.7% | 58.3% | 20.8% | 20.8% |
| Maximum Green (s)       | 48.5  | 48.5  | 7.0   |       | 20.0  | 20.0  |
| Yellow Time (s)         | 4.5   | 4.5   | 4.0   |       | 3.0   | 3.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   |       | 2.0   | 2.0   |
| Lead/Lag                | Lead  | Lead  | Lag   |       | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |
| Vehicle Extension (s)   | 0.2   | 0.2   | 2.0   |       | 4.0   | 2.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 2.0   |       | 4.0   | 2.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |
| Recall Mode             | C-Max | C-Max | None  |       | None  | None  |
| Walk Time (s)           | 4.0   | 4.0   |       |       | 4.0   | 4.0   |
| Flash Dont Walk (s)     | 12.0  | 12.0  |       |       | 15.0  | 15.0  |
| Pedestrian Calls (#/hr) | 5     | 5     |       |       | 5     | 5     |
| 90th %ile Green (s)     | 50.5  | 50.5  | 7.0   |       | 19.0  | 19.0  |
| 90th %ile Term Code     | Coord | Coord | Max   |       | Ped   | Ped   |
| 70th %ile Green (s)     | 72.4  | 72.4  | 7.0   |       | 9.1   | 7.0   |
| 70th %ile Term Code     | Coord | Coord | Max   |       | Gap   | Min   |
| 50th %ile Green (s)     | 86.1  | 86.1  | 7.0   |       | 7.4   | 0.0   |
| 50th %ile Term Code     | Coord | Coord | Max   |       | Gap   | Skip  |
| 30th %ile Green (s)     | 86.5  | 86.5  | 7.0   |       | 7.0   | 0.0   |
| 30th %ile Term Code     | Coord | Coord | Max   |       | Min   | Skip  |
| 10th %ile Green (s)     | 98.5  | 98.5  | 7.0   |       | 0.0   | 0.0   |
| 10th %ile Term Code     | Coord | Coord | Max   |       | Skip  | Skip  |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 96 (80%), Referenced to phase 1:EBWB, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
14: Dawes Ave & Seminary Rd

Existing 2010  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR   |
|---------------------|-------|------|------|-------|-------|------|------|-------|------|------|------|-------|
| Lane Configurations |       |      |      |       |       |      |      |       |      |      |      |       |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12   | 12   | 12    | 12   | 12   | 12   | 12    |
| Grade (%)           |       | 0%   |      |       | 0%    |      |      | 0%    |      |      | 0%   |       |
| Storage Length (ft) | 240   |      | 0    | 55    |       | 0    | 0    |       | 0    | 0    |      | 0     |
| Storage Lanes       | 1     |      | 0    | 1     |       | 0    | 0    |       | 0    | 0    |      | 1     |
| Taper Length (ft)   | 50    |      |      | 50    |       |      | 50   |       | 50   |      |      | 50    |
| 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  |
| Ped Bike Factor     |       | 1.00 |      |       |       |      |      | 0.99  |      |      |      | 0.97  |
| Frt                 |       |      |      |       | 0.994 |      |      | 0.927 |      |      |      | 0.850 |
| Flt Protected       | 0.950 |      |      | 0.950 |       |      |      | 0.987 |      |      |      | 0.962 |
| Satd. Flow (prot)   | 1770  | 3539 | 0    | 1770  | 3518  | 0    | 0    | 1685  | 0    | 0    | 1792 | 1583  |
| Flt Permitted       | 0.180 |      |      | 0.049 |       |      |      | 0.901 |      |      |      | 0.738 |
| Satd. Flow (perm)   | 335   | 3539 | 0    | 91    | 3518  | 0    | 0    | 1539  | 0    | 0    | 1375 | 1540  |
| Right Turn on Red   |       |      | Yes  |       |       | Yes  |      |       | Yes  |      |      | Yes   |
| Satd. Flow (RTOR)   |       |      |      |       | 6     |      |      | 32    |      |      |      | 48    |
| Link Speed (mph)    |       | 35   |      |       | 35    |      |      | 25    |      |      |      | 25    |
| Link Distance (ft)  |       | 248  |      |       | 1011  |      |      | 734   |      |      |      | 1285  |
| Travel Time (s)     |       | 4.8  |      |       | 19.7  |      |      | 20.0  |      |      |      | 35.0  |

Intersection Summary

Area Type: Other

Timings  
14: Dawes Ave & Seminary Rd

Existing 2010  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     |
| Volume (vph)         | 40    | 1785  | 140   | 1150  | 15    | 10    | 90    | 25    | 45    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | NA    | Perm  |
| Protected Phases     | 5     | 2     | 1     | 6     |       | 4     |       | 4     |       |
| Permitted Phases     | 2     |       | 6     |       | 4     |       | 4     |       | 4     |
| Detector Phase       | 5     | 2     | 1     | 6     | 4     | 4     | 4     | 4     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 10.0  | 4.0   | 10.0  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)    | 9.0   | 30.0  | 9.0   | 16.0  | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  |
| Total Split (s)      | 13.0  | 79.0  | 13.0  | 79.0  | 28.0  | 28.0  | 28.0  | 28.0  | 28.0  |
| Total Split (%)      | 10.8% | 65.8% | 10.8% | 65.8% | 23.3% | 23.3% | 23.3% | 23.3% | 23.3% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | -1.0  | -2.0  | -1.0  | -2.0  | -2.0  | -2.0  | -2.0  | -2.0  | -2.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 88.6  | 82.3  | 93.7  | 86.5  | 17.1  | 17.1  | 17.1  | 17.1  | 17.1  |
| Actuated g/C Ratio   | 0.74  | 0.69  | 0.78  | 0.72  | 0.14  | 0.14  | 0.14  | 0.14  | 0.14  |
| v/c Ratio            | 0.13  | 0.79  | 0.79  | 0.51  | 0.24  | 0.63  | 0.18  | 0.18  | 0.18  |
| Control Delay        | 4.6   | 17.2  | 33.7  | 11.9  | 25.5  | 62.1  | 13.2  | 13.2  | 13.2  |
| Queue Delay          | 0.0   | 4.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 4.6   | 21.2  | 33.7  | 11.9  | 25.5  | 62.1  | 13.2  | 13.2  | 13.2  |
| LOS                  | A     | C     | C     | B     | C     | E     | B     | B     | B     |
| Approach Delay       |       | 20.9  |       | 14.2  |       | 25.5  |       | 48.4  |       |
| Approach LOS         |       | C     |       | B     |       | C     |       | D     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 70 (58%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 19.6  
 Intersection LOS: B  
 Intersection Capacity Utilization 81.4%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 14: Dawes Ave & Seminary Rd



Phasings  
14: Dawes Ave & Seminary Rd

Existing 2010  
PM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 5     | 2     | 1     | 6     |       | 4     |       | 4     |       |
| Permitted Phases        | 2     |       | 6     |       | 4     |       | 4     |       | 4     |
| Minimum Initial (s)     | 4.0   | 10.0  | 4.0   | 10.0  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)       | 9.0   | 30.0  | 9.0   | 16.0  | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  |
| Total Split (s)         | 13.0  | 79.0  | 13.0  | 79.0  | 28.0  | 28.0  | 28.0  | 28.0  | 28.0  |
| Total Split (%)         | 10.8% | 65.8% | 10.8% | 65.8% | 23.3% | 23.3% | 23.3% | 23.3% | 23.3% |
| Maximum Green (s)       | 8.0   | 73.0  | 8.0   | 73.0  | 22.0  | 22.0  | 22.0  | 22.0  | 22.0  |
| Yellow Time (s)         | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   |       |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 0.2   | 2.0   | 0.2   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Minimum Gap (s)         | 2.0   | 0.2   | 2.0   | 0.2   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  |
| Walk Time (s)           | 4.0   |       | 4.0   |       | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Flash Dont Walk (s)     | 20.0  |       | 17.0  |       | 17.0  | 17.0  | 17.0  | 17.0  | 17.0  |
| Pedestrian Calls (#/hr) | 5     |       | 5     |       | 5     | 5     | 5     | 5     | 5     |
| 90th %ile Green (s)     | 6.2   | 73.3  | 8.0   | 75.1  | 21.7  | 21.7  | 21.7  | 21.7  | 21.7  |
| 90th %ile Term Code     | Gap   | Coord | Max   | Coord | Gap   | Gap   | Gap   | Gap   | Gap   |
| 70th %ile Green (s)     | 5.6   | 77.2  | 8.0   | 79.6  | 17.8  | 17.8  | 17.8  | 17.8  | 17.8  |
| 70th %ile Term Code     | Gap   | Coord | Max   | Coord | Gap   | Gap   | Gap   | Gap   | Gap   |
| 50th %ile Green (s)     | 5.2   | 79.9  | 8.0   | 82.7  | 15.1  | 15.1  | 15.1  | 15.1  | 15.1  |
| 50th %ile Term Code     | Gap   | Coord | Max   | Coord | Gap   | Gap   | Gap   | Gap   | Gap   |
| 30th %ile Green (s)     | 4.9   | 82.6  | 8.0   | 85.7  | 12.4  | 12.4  | 12.4  | 12.4  | 12.4  |
| 30th %ile Term Code     | Gap   | Coord | Max   | Coord | Gap   | Gap   | Gap   | Gap   | Gap   |
| 10th %ile Green (s)     | 0.0   | 88.5  | 6.0   | 99.5  | 8.5   | 8.5   | 8.5   | 8.5   | 8.5   |
| 10th %ile Term Code     | Skip  | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Gap   | Gap   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 70 (58%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Control Type: Actuated-Coordinated



Lanes and Geometrics  
15: Beauregard St & Mark Center Dr

Existing 2010  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL   | NBT  | NBR   | SBL   | SBT  | SBR  |
|---------------------|-------|------|------|-------|-------|------|-------|------|-------|-------|------|------|
| Lane Configurations | ↔     | ↔    | ↔    | ↔     | ↔     | ↔    | ↔     | ↔    | ↔     | ↔     | ↔    | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12   |
| Grade (%)           | 0%    |      | 0%   |       | 0%    |      | 0%    |      | 0%    |       | 0%   |      |
| Storage Length (ft) | 0     |      | 0    | 0     |       | 0    | 190   |      | 0     | 210   |      | 0    |
| Storage Lanes       | 1     |      | 0    | 1     |       | 0    | 1     |      | 0     | 1     |      | 0    |
| Taper Length (ft)   | 50    |      |      | 50    |       |      | 50    |      |       | 50    |      |      |
| Lane Util. Factor   | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 0.91 | 0.91  | 1.00  | 0.95 | 0.95 |
| Ped Bike Factor     | 0.99  |      |      |       | 0.98  |      | 1.00  |      | 1.00  |       |      |      |
| Frt                 | 0.911 |      |      |       | 0.857 |      | 0.996 |      | 0.992 |       |      |      |
| Flt Protected       | 0.950 |      |      | 0.950 |       |      | 0.950 |      |       | 0.950 |      |      |
| Satd. Flow (prot)   | 1770  | 1681 | 0    | 1770  | 1570  | 0    | 1770  | 5063 | 0     | 1770  | 3506 | 0    |
| Flt Permitted       | 0.613 |      |      | 0.722 |       |      | 0.099 |      |       | 0.268 |      |      |
| Satd. Flow (perm)   | 1142  | 1681 | 0    | 1345  | 1570  | 0    | 184   | 5063 | 0     | 499   | 3506 | 0    |
| Right Turn on Red   |       |      | Yes  |       |       | Yes  |       |      | Yes   |       |      | Yes  |
| Satd. Flow (RTOR)   | 32    |      |      |       | 97    |      | 5     |      | 7     |       |      |      |
| Link Speed (mph)    | 25    |      |      |       | 25    |      | 35    |      | 35    |       |      |      |
| Link Distance (ft)  | 355   |      |      |       | 910   |      | 780   |      | 824   |       |      |      |
| Travel Time (s)     | 9.7   |      |      |       | 24.8  |      | 15.2  |      | 16.1  |       |      |      |

Intersection Summary

Area Type: Other

Timings  
15: Beauregard St & Mark Center Dr

Existing 2010  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 70    | 20    | 115   | 5     | 5     | 840   | 65    | 1505  |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 4     |       | 4     |       | 4     |       | 5     |       |
| Permitted Phases     | 4     |       | 4     |       | 2     |       | 6     |       |
| Detector Phase       | 4     |       | 4     |       | 5     |       | 2     |       |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 33.0  | 33.0  | 33.0  | 33.0  | 9.0   | 24.0  | 9.0   | 24.0  |
| Total Split (s)      | 34.0  | 34.0  | 34.0  | 34.0  | 15.0  | 71.0  | 15.0  | 71.0  |
| Total Split (%)      | 28.3% | 28.3% | 28.3% | 28.3% | 12.5% | 59.2% | 12.5% | 59.2% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.0  | -2.0  | -2.0  | -2.0  | -1.0  | -2.0  | -1.0  | -2.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  | 18.5  | 18.5  | 18.5  | 18.5  | 89.2  | 84.7  | 93.2  | 91.5  |
| Actuated g/C Ratio   | 0.15  | 0.15  | 0.15  | 0.15  | 0.74  | 0.71  | 0.78  | 0.76  |
| v/c Ratio            | 0.43  | 0.19  | 0.60  | 0.32  | 0.02  | 0.26  | 0.15  | 0.64  |
| Control Delay        | 51.4  | 21.9  | 57.9  | 11.2  | 7.4   | 10.6  | 4.0   | 6.6   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.3   |
| Total Delay          | 51.4  | 21.9  | 57.9  | 11.2  | 7.4   | 10.6  | 4.0   | 6.9   |
| LOS                  | D     | C     | E     | B     | A     | B     | A     | A     |
| Approach Delay       | 39.0  |       | 36.9  |       | 10.6  |       | 6.8   |       |
| Approach LOS         | D     |       | D     |       | B     |       | A     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 31 (26%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.64  
 Intersection Signal Delay: 11.5  
 Intersection LOS: B  
 Intersection Capacity Utilization 71.7%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 15: Beauregard St & Mark Center Dr



Phasings  
15: Beauregard St & Mark Center Dr

Existing 2010  
PM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 4     |       | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases        | 4     |       | 4     |       | 2     |       | 6     |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)       | 33.0  | 33.0  | 33.0  | 33.0  | 9.0   | 24.0  | 9.0   | 24.0  |
| Total Split (s)         | 34.0  | 34.0  | 34.0  | 34.0  | 15.0  | 71.0  | 15.0  | 71.0  |
| Total Split (%)         | 28.3% | 28.3% | 28.3% | 28.3% | 12.5% | 59.2% | 12.5% | 59.2% |
| Maximum Green (s)       | 28.0  | 28.0  | 28.0  | 28.0  | 10.0  | 65.0  | 10.0  | 65.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.2   | 2.0   | 0.2   |
| Minimum Gap (s)         | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.2   | 2.0   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Walk Time (s)           | 8.0   | 8.0   | 8.0   | 8.0   |       | 6.0   |       | 6.0   |
| Flash Dont Walk (s)     | 19.0  | 19.0  | 19.0  | 19.0  |       | 12.0  |       | 12.0  |
| Pedestrian Calls (#/hr) | 5     | 5     | 5     | 5     |       | 5     |       | 5     |
| 90th %ile Green (s)     | 27.0  | 27.0  | 27.0  | 27.0  | 5.0   | 68.5  | 7.5   | 71.0  |
| 90th %ile Term Code     | Ped   | Ped   | Ped   | Ped   | Gap   | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 18.4  | 18.4  | 18.4  | 18.4  | 0.0   | 78.5  | 6.1   | 89.6  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Skip  | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 15.6  | 15.6  | 15.6  | 15.6  | 0.0   | 81.8  | 5.6   | 92.4  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Skip  | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 12.7  | 12.7  | 12.7  | 12.7  | 0.0   | 85.1  | 5.2   | 95.3  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Skip  | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 8.6   | 8.6   | 8.6   | 8.6   | 0.0   | 99.4  | 0.0   | 99.4  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Skip  | Coord | Skip  | Coord |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 31 (26%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
16: Beauregard St & Clyde's Restaurant/Highview Ln

Existing 2010  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT  | WBR  | NBL   | NBT  | NBR  | SBL   | SBT  | SBR  |
|---------------------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|
| Lane Configurations |       |      |      |       |      |      |       |      |      |       |      |      |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12   | 12   |
| Grade (%)           |       | 0%   |      |       |      | 0%   |       | 0%   |      |       |      | -1%  |
| Storage Length (ft) | 0     |      | 150  | 115   |      | 0    | 185   |      | 200  | 185   |      | 0    |
| Storage Lanes       | 1     |      | 1    | 1     |      | 0    | 1     |      | 1    | 1     |      | 0    |
| Taper Length (ft)   | 50    |      |      | 50    |      |      | 50    |      |      | 50    |      |      |
| Lane Util. Factor   | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 0.91 | 0.91 | 1.00  | 0.95 | 0.95 |
| Ped Bike Factor     | 0.99  |      |      | 0.99  |      |      | 1.00  |      |      | 1.00  |      | 1.00 |
| Frt                 | 0.897 |      |      | 0.862 |      |      | 0.998 |      |      | 0.993 |      |      |
| Flt Protected       | 0.950 |      |      | 0.950 |      |      | 0.950 |      |      | 0.950 |      |      |
| Satd. Flow (prot)   | 1770  | 1654 | 0    | 1770  | 1586 | 0    | 1770  | 5073 | 0    | 1778  | 3527 | 0    |
| Flt Permitted       | 0.715 |      |      | 0.747 |      |      | 0.092 |      |      | 0.328 |      |      |
| Satd. Flow (perm)   | 1332  | 1654 | 0    | 1391  | 1586 | 0    | 171   | 5073 | 0    | 614   | 3527 | 0    |
| Right Turn on Red   |       |      | Yes  |       |      | Yes  |       |      | Yes  |       |      | Yes  |
| Satd. Flow (RTOR)   |       | 11   |      | 59    |      |      | 3     |      |      | 7     |      |      |
| Link Speed (mph)    | 25    |      |      | 25    |      |      | 35    |      |      | 35    |      |      |
| Link Distance (ft)  | 521   |      |      | 422   |      |      | 719   |      |      | 780   |      |      |
| Travel Time (s)     |       | 14.2 |      |       | 11.5 |      |       | 14.0 |      |       | 15.2 |      |

Intersection Summary

Area Type: Other

**Timings**  
**16: Beauregard St & Clyde's Restaurant/Highview Ln**

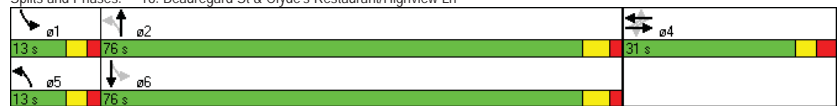
Existing 2010  
 PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |
| Volume (vph)         | 50    | 5     | 55    | 5     | 30    | 760   | 10    | 1560  |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     |       | 4     |       | 4     |       | 2     |       | 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   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 31.0  | 31.0  | 31.0  | 31.0  | 9.0   | 31.0  | 9.0   | 31.0  |
| Total Split (s)      | 31.0  | 31.0  | 31.0  | 31.0  | 13.0  | 76.0  | 13.0  | 76.0  |
| Total Split (%)      | 25.8% | 25.8% | 25.8% | 25.8% | 10.8% | 63.3% | 10.8% | 63.3% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  | 10.7  | 10.7  | 10.7  | 10.7  | 100.1 | 98.9  | 97.7  | 94.4  |
| Actuated g/C Ratio   | 0.09  | 0.09  | 0.09  | 0.09  | 0.83  | 0.82  | 0.81  | 0.79  |
| v/c Ratio            | 0.46  | 0.10  | 0.48  | 0.33  | 0.14  | 0.20  | 0.02  | 0.63  |
| Control Delay        | 63.3  | 29.9  | 63.8  | 18.7  | 3.2   | 2.0   | 1.1   | 5.2   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.1   |
| Total Delay          | 63.3  | 29.9  | 63.8  | 18.7  | 3.2   | 2.0   | 1.1   | 5.4   |
| LOS                  | E     | C     | E     | B     | A     | A     | A     | A     |
| Approach Delay       |       | 55.6  |       | 40.3  |       | 2.1   |       | 5.4   |
| Approach LOS         |       | E     |       | D     |       | A     |       | A     |

**Intersection Summary**

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 52 (43%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.63  
 Intersection Signal Delay: 7.1  
 Intersection LOS: A  
 Intersection Capacity Utilization 65.9%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 16: Beauregard St & Clyde's Restaurant/Highview Ln



**Phasings**  
**16: Beauregard St & Clyde's Restaurant/Highview Ln**

Existing 2010  
 PM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 4     |       | 4     |       | 5     | 2     | 1     |
| Permitted Phases        | 4     |       | 4     |       |       | 2     |       | 6     |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)       | 31.0  | 31.0  | 31.0  | 31.0  | 9.0   | 31.0  | 9.0   | 31.0  |
| Total Split (s)         | 31.0  | 31.0  | 31.0  | 31.0  | 13.0  | 76.0  | 13.0  | 76.0  |
| Total Split (%)         | 25.8% | 25.8% | 25.8% | 25.8% | 10.8% | 63.3% | 10.8% | 63.3% |
| Maximum Green (s)       | 25.0  | 25.0  | 25.0  | 25.0  | 8.0   | 70.0  | 8.0   | 70.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   |       | 7.0   |       | 7.0   |
| Flash Dont Walk (s)     | 18.0  | 18.0  | 18.0  | 18.0  |       | 18.0  |       | 18.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     |       | 0     |       | 0     |
| 90th %ile Green (s)     | 15.0  | 15.0  | 15.0  | 15.0  | 6.6   | 82.0  | 6.0   | 81.4  |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 12.3  | 12.3  | 12.3  | 12.3  | 6.1   | 95.7  | 0.0   | 84.6  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Skip  | Coord |
| 50th %ile Green (s)     | 10.4  | 10.4  | 10.4  | 10.4  | 5.8   | 97.6  | 0.0   | 86.8  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Skip  | Coord |
| 30th %ile Green (s)     | 8.6   | 8.6   | 8.6   | 8.6   | 0.0   | 99.4  | 0.0   | 99.4  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Skip  | Coord | Skip  | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 114.0 | 0.0   | 114.0 |
| 10th %ile Term Code     | Skip  | Skip  | Skip  | Skip  | Skip  | Coord | Skip  | Coord |

**Intersection Summary**

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 52 (43%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
 18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent Existing 2010  
 PM PEAK

| Lane Group          | EBL   | EBT   | EBR   | WBL  | WBT   | WBR   | NBL   | NBT   | NBR  | SBL   | SBT  | SBR   |
|---------------------|-------|-------|-------|------|-------|-------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↔     | ↔     | ↔     | ↔    | ↔     | ↔     | ↔     | ↔     | ↔    | ↔     | ↔    | ↔     |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12    | 12   | 12    | 12    | 12    | 12    | 12   | 12    | 12   | 12    |
| Grade (%)           |       | 0%    |       |      | 0%    |       |       | 0%    |      |       | 0%   |       |
| Storage Length (ft) | 235   |       | 0     | 0    |       | 20    | 235   |       | 0    | 150   |      | 170   |
| Storage Lanes       | 1     |       | 1     | 0    |       | 1     | 1     |       | 0    | 1     |      | 1     |
| Taper Length (ft)   | 50    |       |       | 50   |       |       | 50    |       |      | 50    |      |       |
| Lane Util. Factor   | 0.95  | 0.95  | 1.00  | 1.00 | 1.00  | 1.00  | 0.97  | 0.95  | 0.95 | 1.00  | 0.95 | 1.00  |
| Ped Bike Factor     |       |       |       |      |       |       | 0.97  |       |      |       |      | 0.98  |
| Frt                 |       |       | 0.850 |      |       | 0.850 |       | 0.996 |      |       |      | 0.850 |
| Flt Protected       | 0.950 | 0.990 |       |      | 0.970 |       | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (prot)   | 1681  | 1752  | 1583  | 0    | 1807  | 1583  | 3433  | 3525  | 0    | 1770  | 3539 | 1417  |
| Flt Permitted       | 0.950 | 0.990 |       |      | 0.970 |       | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (perm)   | 1681  | 1752  | 1583  | 0    | 1807  | 1535  | 3433  | 3525  | 0    | 1770  | 3539 | 1386  |
| Right Turn on Red   |       |       | Yes   |      |       | Yes   |       |       | Yes  |       |      | Yes   |
| Satd. Flow (RTOR)   |       |       | 618   |      |       | 6     |       | 2     |      |       |      | 188   |
| Link Speed (mph)    |       | 35    |       |      | 15    |       |       | 35    |      |       |      | 35    |
| Link Distance (ft)  |       | 1573  |       |      | 252   |       |       | 414   |      |       |      | 921   |
| Travel Time (s)     |       | 30.6  |       |      | 11.5  |       |       | 8.1   |      |       |      | 17.9  |

Intersection Summary

Area Type: Other

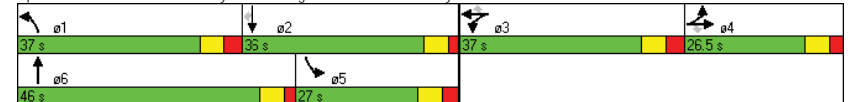
Timings  
 18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent Existing 2010  
 PM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 80    | 55    | 890   | 60    | 15    | 575   | 620   | 75    | 840   | 310   |
| Turn Type            | Split | NA    | Perm  | NA    | Perm  | Prot  | NA    | Prot  | NA    | Perm  |
| Protected Phases     | 4     | 4     |       | 3     |       | 1     | 6     | 5     | 2     |       |
| Permitted Phases     |       |       | 4     |       | 3     |       |       |       |       | 2     |
| Detector Phase       | 4     | 4     | 4     | 3     | 3     | 1     | 6     | 5     | 2     | 2     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 11.5  | 11.5  | 11.5  | 37.0  | 37.0  | 12.0  | 11.0  | 12.0  | 11.0  | 11.0  |
| Total Split (s)      | 26.5  | 26.5  | 26.5  | 37.0  | 37.0  | 37.0  | 46.0  | 27.0  | 36.0  | 36.0  |
| Total Split (%)      | 19.4% | 19.4% | 19.4% | 27.1% | 27.1% | 27.1% | 33.7% | 19.8% | 26.4% | 26.4% |
| Yellow Time (s)      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 2.5   | 2.5   | 2.5   | 3.0   | 3.0   | 3.0   | 2.0   | 3.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | -3.0  | -3.0  | -3.0  | -2.0  | -3.0  | -2.0  | -2.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lag   | Lag   | Lag   | Lead  | Lead  | Lead  | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | Min   | None  | None  | None  |
| Act Effct Green (s)  | 22.7  | 22.7  | 22.7  | 21.0  | 21.0  | 28.8  | 39.1  | 25.0  | 32.2  | 32.2  |
| Actuated g/C Ratio   | 0.19  | 0.19  | 0.19  | 0.17  | 0.17  | 0.24  | 0.32  | 0.21  | 0.27  | 0.27  |
| v/c Ratio            | 0.23  | 0.22  | 1.20  | 0.55  | 0.06  | 0.76  | 0.60  | 0.22  | 0.96  | 0.66  |
| Control Delay        | 47.1  | 47.0  | 117.0 | 52.6  | 31.5  | 49.9  | 40.1  | 42.6  | 65.0  | 24.9  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 47.1  | 47.0  | 117.0 | 52.6  | 31.5  | 49.9  | 40.1  | 42.6  | 65.0  | 24.9  |
| LOS                  | D     | D     | F     | D     | C     | D     | D     | D     | E     | C     |
| Approach Delay       |       | 107.8 |       | 50.9  |       |       | 44.8  |       | 53.5  |       |
| Approach LOS         |       | F     |       | D     |       |       | D     |       | D     |       |

Intersection Summary

Cycle Length: 136.5  
 Actuated Cycle Length: 120.8  
 Natural Cycle: 130  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.20  
 Intersection Signal Delay: 65.8  
 Intersection Capacity Utilization 103.1%  
 Analysis Period (min) 15  
 Intersection LOS: E  
 ICU Level of Service G

Splits and Phases: 18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent



Phasings Existing 2010  
PM PEAK  
18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent

| Lane Group              | EBL   | EBT   | EBR   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 4     | 4     |       | 3     |       | 1     | 6     | 5     | 2     |       |
| Permitted Phases        |       |       | 4     |       | 3     |       |       |       |       | 2     |
| Minimum Initial (s)     | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)       | 11.5  | 11.5  | 11.5  | 37.0  | 37.0  | 12.0  | 11.0  | 12.0  | 11.0  | 11.0  |
| Total Split (s)         | 26.5  | 26.5  | 26.5  | 37.0  | 37.0  | 37.0  | 46.0  | 27.0  | 36.0  | 36.0  |
| Total Split (%)         | 19.4% | 19.4% | 19.4% | 27.1% | 27.1% | 27.1% | 33.7% | 19.8% | 26.4% | 26.4% |
| Maximum Green (s)       | 20.0  | 20.0  | 20.0  | 30.0  | 30.0  | 30.0  | 40.0  | 20.0  | 30.0  | 30.0  |
| Yellow Time (s)         | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 2.5   | 2.5   | 2.5   | 3.0   | 3.0   | 3.0   | 2.0   | 3.0   | 2.0   | 2.0   |
| Lead/Lag                | Lag   | Lag   | Lag   | Lead  | Lead  | Lead  | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | Min   | Min   | None  | None  | None  |
| Walk Time (s)           |       |       |       | 7.0   | 7.0   |       |       |       |       |       |
| Flash Dont Walk (s)     |       |       |       | 23.0  | 23.0  |       |       |       |       |       |
| Pedestrian Calls (#/hr) |       |       |       | 5     | 5     |       |       |       |       |       |
| 90th %ile Green (s)     | 20.0  | 20.0  | 20.0  | 30.0  | 30.0  | 30.0  | 38.8  | 21.2  | 30.0  | 30.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Ped   | Ped   | Max   | Gap   | Hold  | Max   | Max   |
| 70th %ile Green (s)     | 20.0  | 20.0  | 20.0  | 19.8  | 19.8  | 30.0  | 32.4  | 27.6  | 30.0  | 30.0  |
| 70th %ile Term Code     | Max   | Max   | Max   | Gap   | Gap   | Max   | Gap   | Hold  | Max   | Max   |
| 50th %ile Green (s)     | 20.0  | 20.0  | 20.0  | 17.1  | 17.1  | 26.7  | 29.4  | 27.3  | 30.0  | 30.0  |
| 50th %ile Term Code     | Max   | Max   | Max   | Gap   | Gap   | Gap   | Gap   | Hold  | Max   | Max   |
| 30th %ile Green (s)     | 20.0  | 20.0  | 20.0  | 14.4  | 14.4  | 23.5  | 25.2  | 28.3  | 30.0  | 30.0  |
| 30th %ile Term Code     | Max   | Max   | Max   | Gap   | Gap   | Gap   | Gap   | Hold  | Max   | Max   |
| 10th %ile Green (s)     | 20.0  | 20.0  | 20.0  | 10.7  | 10.7  | 19.3  | 56.3  | 0.0   | 30.0  | 30.0  |
| 10th %ile Term Code     | Max   | Max   | Max   | Gap   | Gap   | Gap   | Hold  | Skip  | Max   | Max   |

| Intersection Summary      |                        |
|---------------------------|------------------------|
| Cycle Length:             | 136.5                  |
| Actuated Cycle Length:    | 120.8                  |
| Control Type:             | Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: | 136.5                  |
| 70th %ile Actuated Cycle: | 126.3                  |
| 50th %ile Actuated Cycle: | 120.3                  |
| 30th %ile Actuated Cycle: | 114.4                  |
| 10th %ile Actuated Cycle: | 106.5                  |

Lanes and Geometrics Existing 2010  
PM PEAK  
20: Hampton Dr & Braddock Rd

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL  | NBT   | NBR   | SBL  | SBT  | SBR   |
|---------------------|-------|-------|------|-------|-------|------|------|-------|-------|------|------|-------|
| Lane Configurations |       |       |      |       |       |      |      |       |       |      |      |       |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   | 12   | 12    | 12    | 12   | 12   | 12    |
| Grade (%)           |       | 0%    |      |       | 0%    |      |      | 0%    |       |      | 0%   |       |
| Storage Length (ft) | 170   |       | 0    | 125   |       | 0    | 0    |       | 0     | 0    |      | 0     |
| Storage Lanes       | 1     |       | 0    | 1     |       | 0    | 0    |       | 1     | 0    |      | 1     |
| Taper Length (ft)   | 50    |       |      | 50    |       |      | 50   |       |       | 50   |      |       |
| 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  |
| Ped Bike Factor     |       | 1.00  |      |       | 1.00  |      |      |       |       |      |      | 0.99  |
| Frt                 |       | 0.993 |      |       | 0.970 |      |      |       | 0.850 |      |      | 0.850 |
| Flt Protected       | 0.950 |       |      | 0.950 |       |      |      | 0.972 |       |      |      | 0.961 |
| Satd. Flow (prot)   | 1770  | 3512  | 0    | 1770  | 3421  | 0    | 0    | 1811  | 1583  | 0    | 1790 | 1583  |
| Flt Permitted       | 0.463 |       |      | 0.447 |       |      |      | 0.607 |       |      |      | 0.740 |
| Satd. Flow (perm)   | 862   | 3512  | 0    | 833   | 3421  | 0    | 0    | 1131  | 1583  | 0    | 1378 | 1560  |
| Right Turn on Red   |       |       | Yes  |       |       | Yes  |      |       | Yes   |      |      | Yes   |
| Satd. Flow (RTOR)   |       | 8     |      |       | 47    |      |      |       | 16    |      |      | 129   |
| Link Speed (mph)    |       | 35    |      |       | 35    |      |      | 25    |       |      |      | 25    |
| Link Distance (ft)  |       | 1885  |      |       | 1164  |      |      | 416   |       |      |      | 1404  |
| Travel Time (s)     |       | 36.7  |      |       | 22.7  |      |      | 11.3  |       |      |      | 38.3  |

| Intersection Summary |       |
|----------------------|-------|
| Area Type:           | Other |

Timings  
20: Hampton Dr & Braddock Rd

Existing 2010  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↕     | ↔     | ↕     | ↔     |
| Volume (vph)         | 70    | 485   | 35    | 355   | 20    | 15    | 15    | 195   | 45    | 120   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | Perm  | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     |       | 3     |       |       | 3     |       |
| Permitted Phases     | 6     |       | 2     |       | 3     |       | 3     | 3     |       | 3     |
| Detector Phase       | 1     | 6     | 5     | 2     | 3     | 3     | 3     | 3     | 3     | 3     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 9.0   | 16.5  | 9.0   | 16.5  | 12.0  | 12.0  | 12.0  | 12.0  | 12.0  | 12.0  |
| Total Split (s)      | 20.0  | 51.5  | 20.0  | 51.5  | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  |
| Total Split (%)      | 21.6% | 55.7% | 21.6% | 55.7% | 22.7% | 22.7% | 22.7% | 22.7% | 22.7% | 22.7% |
| Yellow Time (s)      | 3.0   | 3.5   | 3.0   | 3.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| 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)  | 5.0   | 6.5   | 5.0   | 6.5   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   |       |       |       |       |       |       |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   |       |       |       |       |       |       |
| Recall Mode          | None  | Max   | None  | Max   | None  | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 52.7  | 47.6  | 50.7  | 45.1  | 15.0  | 15.0  |       | 15.0  | 15.0  |       |
| Actuated g/C Ratio   | 0.65  | 0.59  | 0.62  | 0.56  | 0.18  | 0.18  |       | 0.18  | 0.18  |       |
| v/c Ratio            | 0.12  | 0.27  | 0.07  | 0.25  | 0.18  | 0.05  |       | 1.01  | 0.33  |       |
| Control Delay        | 4.8   | 9.2   | 4.6   | 9.2   | 31.8  | 14.5  |       | 96.4  | 8.5   |       |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Total Delay          | 4.8   | 9.2   | 4.6   | 9.2   | 31.8  | 14.5  |       | 96.4  | 8.5   |       |
| LOS                  | A     | A     | A     | A     | C     | B     |       | F     | A     |       |
| Approach Delay       |       | 8.7   |       | 8.9   |       | 26.7  |       |       | 67.1  |       |
| Approach LOS         |       | A     |       | A     |       | C     |       |       | E     |       |

Intersection Summary

|   |                        |
|---|------------------------|
| Cycle Length: 92.5                      |                        |
| Actuated Cycle Length: 81.2             |                        |
| Natural Cycle: 45                       |                        |
| Control Type: Actuated-Uncoordinated    |                        |
| Maximum v/c Ratio: 1.01                 |                        |
| Intersection Signal Delay: 23.7         | Intersection LOS: C    |
| Intersection Capacity Utilization 52.3% | ICU Level of Service A |
| Analysis Period (min) 15                |                        |

Splits and Phases: 20: Hampton Dr & Braddock Rd



Phasings  
20: Hampton Dr & Braddock Rd

Existing 2010  
PM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 1     | 6     | 5     | 2     |       | 3     |       |       | 3     |       |
| Permitted Phases        | 6     |       | 2     |       | 3     |       | 3     | 3     |       | 3     |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 9.0   | 16.5  | 9.0   | 16.5  | 12.0  | 12.0  | 12.0  | 12.0  | 12.0  | 12.0  |
| Total Split (s)         | 20.0  | 51.5  | 20.0  | 51.5  | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  |
| Total Split (%)         | 21.6% | 55.7% | 21.6% | 55.7% | 22.7% | 22.7% | 22.7% | 22.7% | 22.7% | 22.7% |
| Maximum Green (s)       | 15.0  | 45.0  | 15.0  | 45.0  | 15.0  | 15.0  | 15.0  | 15.0  | 15.0  | 15.0  |
| Yellow Time (s)         | 3.0   | 3.5   | 3.0   | 3.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   |       |       |       |       |       |       |
| Lead-Lag Optimize?      | Yes   | Yes   | Yes   | Yes   |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 4.0   | 2.0   | 4.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | Max   | None  | Max   | None  | None  | None  | None  | None  | None  |
| Walk Time (s)           |       |       |       |       | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |       |       |       | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  |
| Pedestrian Calls (#/hr) |       |       |       |       | 0     | 0     | 0     | 0     | 0     | 0     |
| 90th %ile Green (s)     | 6.8   | 46.0  | 5.8   | 45.0  | 15.0  | 15.0  | 15.0  | 15.0  | 15.0  | 15.0  |
| 90th %ile Term Code     | Gap   | Hold  | Gap   | MaxR  | Max   | Max   | Max   | Max   | Max   | Max   |
| 70th %ile Green (s)     | 6.1   | 45.8  | 5.3   | 45.0  | 15.0  | 15.0  | 15.0  | 15.0  | 15.0  | 15.0  |
| 70th %ile Term Code     | Gap   | Hold  | Gap   | MaxR  | Max   | Max   | Max   | Max   | Max   | Max   |
| 50th %ile Green (s)     | 5.6   | 45.6  | 5.0   | 45.0  | 15.0  | 15.0  | 15.0  | 15.0  | 15.0  | 15.0  |
| 50th %ile Term Code     | Gap   | Hold  | Gap   | MaxR  | Max   | Max   | Max   | Max   | Max   | Max   |
| 30th %ile Green (s)     | 5.2   | 55.2  | 0.0   | 45.0  | 15.0  | 15.0  | 15.0  | 15.0  | 15.0  | 15.0  |
| 30th %ile Term Code     | Gap   | Hold  | Skip  | MaxR  | Max   | Max   | Max   | Max   | Max   | Max   |
| 10th %ile Green (s)     | 0.0   | 45.0  | 0.0   | 45.0  | 15.0  | 15.0  | 15.0  | 15.0  | 15.0  | 15.0  |
| 10th %ile Term Code     | Skip  | MaxR  | Skip  | MaxR  | Max   | Max   | Max   | Max   | Max   | Max   |

Intersection Summary

|                                      |
|--------------------------------------|
| Cycle Length: 92.5                   |
| Actuated Cycle Length: 81.2          |
| Control Type: Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: 84.3       |
| 70th %ile Actuated Cycle: 83.6       |
| 50th %ile Actuated Cycle: 83.1       |
| 30th %ile Actuated Cycle: 82.7       |
| 10th %ile Actuated Cycle: 72.5       |

Lanes and Geometrics  
23: Library Ln & Seminary Rd

Existing 2010  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL  | NBT   | NBR   | SBL  | SBT   | SBR  |
|---------------------|-------|------|------|-------|-------|------|------|-------|-------|------|-------|------|
| Lane Configurations | ↔     | ↔↔↔  | ↔    | ↔     | ↔↔↔   | ↔    | ↔    | ↔     | ↔     | ↔    | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12   | 12   | 12    | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |      | 0%   |       | 0%    |      | 0%   |       | 0%    |      | 0%    |      |
| Storage Length (ft) | 150   |      | 0    | 45    |       | 0    | 0    |       | 0     | 0    |       | 0    |
| Storage Lanes       | 1     |      | 0    | 1     |       | 0    | 0    |       | 0     | 0    |       | 0    |
| Taper Length (ft)   | 50    |      |      | 50    |       |      | 50   |       |       | 50   |       |      |
| Lane Util. Factor   | 1.00  | 0.91 | 0.91 | 1.00  | 0.91  | 0.91 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 |
| Ped Bike Factor     | 1.00  | 1.00 |      | 0.99  | 1.00  |      |      | 0.93  |       |      | 0.96  |      |
| Frt                 | 0.998 |      |      |       | 0.993 |      |      |       | 0.986 |      | 0.969 |      |
| Flt Protected       | 0.950 |      |      | 0.950 |       |      |      | 0.962 |       |      | 0.968 |      |
| Satd. Flow (prot)   | 1770  | 5068 | 0    | 1770  | 5044  | 0    | 0    | 1763  | 0     | 0    | 1687  | 0    |
| Flt Permitted       | 0.242 |      |      | 0.143 |       |      |      | 0.701 |       |      | 0.773 |      |
| Satd. Flow (perm)   | 451   | 5068 | 0    | 263   | 5044  | 0    | 0    | 1193  | 0     | 0    | 1338  | 0    |
| Right Turn on Red   |       |      | Yes  |       |       | No   |      |       | Yes   |      |       | Yes  |
| Satd. Flow (RTOR)   | 2     |      |      |       |       |      | 4    |       |       |      | 11    |      |
| Link Speed (mph)    | 35    |      |      |       | 35    |      |      |       | 35    |      | 25    |      |
| Link Distance (ft)  | 234   |      |      |       | 233   |      | 634  |       |       |      | 705   |      |
| Travel Time (s)     | 4.6   |      |      |       | 4.5   |      | 12.4 |       |       |      | 19.2  |      |

Intersection Summary

Area Type: Other

Timings  
23: Library Ln & Seminary Rd

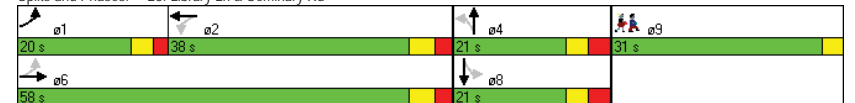
Existing 2010  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | ø9   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations  | ↔     | ↔↔↔   | ↔     | ↔↔↔   | ↔     | ↔     | ↔     | ↔     | ↔    |
| Volume (vph)         | 220   | 1485  | 25    | 835   | 35    | 5     | 85    | 15    |      |
| Turn Type            | pm+pt | NA    | Perm  | NA    | Perm  | NA    | Perm  | NA    |      |
| Protected Phases     | 1     | 6     |       | 2     |       | 4     |       | 8     | 9    |
| Permitted Phases     | 6     |       | 2     |       | 4     |       | 8     |       |      |
| Detector Phase       | 1     | 6     | 2     | 2     | 4     | 4     | 8     | 8     |      |
| Switch Phase         |       |       |       |       |       |       |       |       |      |
| Minimum Initial (s)  | 7.0   | 30.0  | 30.0  | 30.0  | 8.0   | 8.0   | 8.0   | 8.0   | 4.0  |
| Minimum Split (s)    | 12.0  | 36.0  | 36.0  | 36.0  | 21.0  | 21.0  | 21.0  | 21.0  | 31.0 |
| Total Split (s)      | 20.0  | 58.0  | 38.0  | 38.0  | 21.0  | 21.0  | 21.0  | 21.0  | 31.0 |
| Total Split (%)      | 18.2% | 52.7% | 34.5% | 34.5% | 19.1% | 19.1% | 19.1% | 19.1% | 28%  |
| Yellow Time (s)      | 3.0   | 3.5   | 3.5   | 3.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| All-Red Time (s)     | 2.0   | 2.5   | 2.5   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0   | 0.0  |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      |
| Total Lost Time (s)  | 5.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   |      |
| Lead/Lag             | Lead  |       | Lag   | Lag   |       |       |       |       |      |
| Lead-Lag Optimize?   | Yes   |       | Yes   | Yes   |       |       |       |       |      |
| Recall Mode          | None  | C-Max | C-Max | C-Max | None  | None  | None  | None  | None |
| Act Effct Green (s)  | 79.2  | 78.2  | 61.9  | 61.9  |       | 13.6  |       | 13.6  |      |
| Actuated g/C Ratio   | 0.72  | 0.71  | 0.56  | 0.56  |       | 0.12  |       | 0.12  |      |
| v/c Ratio            | 0.52  | 0.45  | 0.18  | 0.33  |       | 0.32  |       | 0.79  |      |
| Control Delay        | 11.8  | 9.5   | 32.8  | 21.8  |       | 46.2  |       | 73.2  |      |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   |       | 0.0   |      |
| Total Delay          | 11.8  | 9.5   | 32.8  | 21.8  |       | 46.2  |       | 73.2  |      |
| LOS                  | B     | A     | C     | C     |       | D     |       | E     |      |
| Approach Delay       | 9.8   |       | 22.1  |       | 46.2  |       | 73.2  |       |      |
| Approach LOS         | A     |       | C     |       | D     |       | E     |       |      |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 52 (47%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 17.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 78.0%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 23: Library Ln & Seminary Rd



Phasings  
23: Library Ln & Seminary Rd

Existing 2010  
PM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | ø9   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Protected Phases        | 1     | 6     |       | 2     |       | 4     |       | 8     | 9    |
| Permitted Phases        | 6     |       | 2     |       | 4     |       | 8     |       |      |
| Minimum Initial (s)     | 7.0   | 30.0  | 30.0  | 30.0  | 8.0   | 8.0   | 8.0   | 8.0   | 4.0  |
| Minimum Split (s)       | 12.0  | 36.0  | 36.0  | 36.0  | 21.0  | 21.0  | 21.0  | 21.0  | 31.0 |
| Total Split (s)         | 20.0  | 58.0  | 38.0  | 38.0  | 21.0  | 21.0  | 21.0  | 21.0  | 31.0 |
| Total Split (%)         | 18.2% | 52.7% | 34.5% | 34.5% | 19.1% | 19.1% | 19.1% | 19.1% | 28%  |
| Maximum Green (s)       | 15.0  | 52.0  | 32.0  | 32.0  | 15.0  | 15.0  | 15.0  | 15.0  | 28.0 |
| Yellow Time (s)         | 3.0   | 3.5   | 3.5   | 3.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| All-Red Time (s)        | 2.0   | 2.5   | 2.5   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0   | 0.0  |
| 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   | 3.0   | 3.0   | 3.0  |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Recall Mode             | None  | C-Max | C-Max | C-Max | None  | None  | None  | None  | None |
| Walk Time (s)           |       |       |       |       |       |       |       |       | 4.0  |
| Flash Dont Walk (s)     |       |       |       |       |       |       |       |       | 24.0 |
| Pedestrian Calls (#/hr) |       |       |       |       |       |       |       |       | 5    |
| 90th %ile Green (s)     | 15.0  | 52.0  | 32.0  | 32.0  | 15.0  | 15.0  | 15.0  | 15.0  | 28.0 |
| 90th %ile Term Code     | Max   | Coord | Coord | Coord | Hold  | Hold  | Max   | Max   | Ped  |
| 70th %ile Green (s)     | 14.2  | 83.0  | 63.8  | 63.8  | 15.0  | 15.0  | 15.0  | 15.0  | 0.0  |
| 70th %ile Term Code     | Gap   | Coord | Coord | Coord | Hold  | Hold  | Max   | Max   | Skip |
| 50th %ile Green (s)     | 11.4  | 83.0  | 66.6  | 66.6  | 15.0  | 15.0  | 15.0  | 15.0  | 0.0  |
| 50th %ile Term Code     | Gap   | Coord | Coord | Coord | Hold  | Hold  | Max   | Max   | Skip |
| 30th %ile Green (s)     | 8.6   | 84.4  | 70.8  | 70.8  | 13.6  | 13.6  | 13.6  | 13.6  | 0.0  |
| 30th %ile Term Code     | Gap   | Coord | Coord | Coord | Hold  | Hold  | Gap   | Gap   | Skip |
| 10th %ile Green (s)     | 7.1   | 88.5  | 76.4  | 76.4  | 9.5   | 9.5   | 9.5   | 9.5   | 0.0  |
| 10th %ile Term Code     | Gap   | Coord | Coord | Coord | Hold  | Hold  | Gap   | Gap   | Skip |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 52 (47%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
33: Seminary Rd (S)/Seminary Rd (N) & Seminary Rd

Existing 2010  
PM PEAK

| Lane Group          | EBL  | EBT  | EBR  | WBL  | WBT   | WBR   | NBL  | NBT  | NBR   | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|-------|-------|------|------|-------|------|------|------|
| Lane Configurations |      | ↑↑   |      |      | ↑↑    | ↑     |      |      | ↑     |      |      |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12   | 12   | 12    | 12    | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           |      | 0%   |      |      | 0%    |       |      | 0%   |       |      | 0%   |      |
| Storage Length (ft) | 0    |      | 0    | 0    |       | 0     | 0    |      | 0     | 0    |      | 0    |
| Storage Lanes       | 0    |      | 0    | 0    |       | 1     | 0    |      | 1     | 0    |      | 0    |
| Taper Length (ft)   | 50   |      |      | 50   |       |       | 50   |      |       | 50   |      |      |
| Lane Util. Factor   | 1.00 | 0.95 | 1.00 | 1.00 | 0.91  | 0.91  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      |      |      | 0.963 | 0.850 |      |      | 0.865 |      |      |      |
| Frnt                |      |      |      |      |       |       |      |      |       |      |      |      |
| Flt Protected       |      |      |      |      |       |       |      |      |       |      |      |      |
| Satd. Flow (prot)   | 0    | 3539 | 0    | 0    | 3265  | 1441  | 0    | 0    | 1611  | 0    | 0    | 0    |
| Flt Permitted       |      |      |      |      |       |       |      |      |       |      |      |      |
| Satd. Flow (perm)   | 0    | 3539 | 0    | 0    | 3265  | 1441  | 0    | 0    | 1611  | 0    | 0    | 0    |
| Link Speed (mph)    |      | 35   |      |      | 35    |       |      | 35   |       |      | 30   |      |
| Link Distance (ft)  |      | 1551 |      |      | 120   |       |      | 418  |       |      | 282  |      |
| Travel Time (s)     |      | 30.2 |      |      | 2.3   |       |      | 8.1  |       |      | 6.4  |      |

Intersection Summary

Area Type: Other



Lanes and Geometrics  
41: Van Dorn St & Kenmore Ave

Existing 2010  
PM PEAK

| Lane Group          | WBL   | WBR   | NBT   | NBR  | SBL  | SBT   |
|---------------------|-------|-------|-------|------|------|-------|
| Lane Configurations | ↔     | ↔     | ↕     | ↕    | ↔    | ↕     |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900  | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12    | 12   | 12   | 12    |
| Grade (%)           | 0%    |       | 0%    |      |      | 0%    |
| Storage Length (ft) | 0     | 50    |       | 0    | 0    |       |
| Storage Lanes       | 1     | 1     |       | 0    | 0    |       |
| Taper Length (ft)   | 50    |       |       |      | 50   |       |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95  | 0.95 | 0.95 | 0.95  |
| Ped Bike Factor     |       |       | 1.00  |      |      |       |
| Frt                 |       | 0.850 | 0.981 |      |      |       |
| Flt Protected       | 0.950 |       |       |      |      | 0.999 |
| Satd. Flow (prot)   | 1770  | 1583  | 3459  | 0    | 0    | 3536  |
| Flt Permitted       | 0.950 |       |       |      |      | 0.909 |
| Satd. Flow (perm)   | 1770  | 1583  | 3459  | 0    | 0    | 3217  |
| Right Turn on Red   |       | Yes   |       | Yes  |      |       |
| Satd. Flow (RTOR)   |       | 16    | 32    |      |      |       |
| Link Speed (mph)    | 30    |       | 35    |      |      | 35    |
| Link Distance (ft)  | 816   |       | 2951  |      |      | 2586  |
| Travel Time (s)     | 18.5  |       | 57.5  |      |      | 50.4  |

Intersection Summary

Area Type: Other

Timings  
41: Van Dorn St & Kenmore Ave

Existing 2010  
PM PEAK

| Lane Group           | WBL   | WBR   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↕     | ↔     | ↕     |
| Volume (vph)         | 350   | 45    | 535   | 40    | 1310  |
| Turn Type            | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 2     |       | 1     |       | 1     |
| Permitted Phases     |       | 2     |       | 1     |       |
| Detector Phase       | 2     | 2     | 1     | 1     | 1     |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)    | 27.5  | 27.5  | 29.0  | 29.0  | 29.0  |
| Total Split (s)      | 29.0  | 29.0  | 81.0  | 81.0  | 81.0  |
| Total Split (%)      | 26.4% | 26.4% | 73.6% | 73.6% | 73.6% |
| Yellow Time (s)      | 3.5   | 3.5   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.5   | 5.5   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             | Lag   | Lag   | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?   |       |       |       |       |       |
| Recall Mode          | None  | None  | C-Max | C-Max | C-Max |
| Act Effct Green (s)  | 23.5  | 23.5  | 75.0  |       | 75.0  |
| Actuated g/C Ratio   | 0.21  | 0.21  | 0.68  |       | 0.68  |
| v/c Ratio            | 0.99  | 0.14  | 0.28  |       | 0.66  |
| Control Delay        | 89.1  | 26.9  | 5.2   |       | 12.0  |
| Queue Delay          | 0.0   | 0.0   | 0.0   |       | 0.0   |
| Total Delay          | 89.1  | 26.9  | 5.2   |       | 12.0  |
| LOS                  | F     | C     | A     |       | B     |
| Approach Delay       | 82.1  |       | 5.2   |       | 12.0  |
| Approach LOS         | F     |       | A     |       | B     |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 15 (14%), Referenced to phase 1:NBSB, Start of Green  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.99  
 Intersection Signal Delay: 22.0  
 Intersection Capacity Utilization 90.5%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service E

Splits and Phases: 41: Van Dorn St & Kenmore Ave



Phasings  
41: Van Dorn St & Kenmore Ave

Existing 2010  
PM PEAK

| Lane Group              | WBL   | WBR   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|
| Protected Phases        | 2     |       | 1     |       | 1     |
| Permitted Phases        |       | 2     |       | 1     |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 27.5  | 27.5  | 29.0  | 29.0  | 29.0  |
| Total Split (s)         | 29.0  | 29.0  | 81.0  | 81.0  | 81.0  |
| Total Split (%)         | 26.4% | 26.4% | 73.6% | 73.6% | 73.6% |
| Maximum Green (s)       | 23.5  | 23.5  | 75.0  | 75.0  | 75.0  |
| Yellow Time (s)         | 3.5   | 3.5   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lag   | Lag   | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?      |       |       |       |       |       |
| Vehicle Extension (s)   | 4.0   | 4.0   | 0.2   | 0.2   | 0.2   |
| Minimum Gap (s)         | 4.0   | 4.0   | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | C-Max | C-Max | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     | 15.0  | 15.0  | 16.0  | 16.0  | 16.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     |
| 90th %ile Green (s)     | 23.5  | 23.5  | 75.0  | 75.0  | 75.0  |
| 90th %ile Term Code     | Max   | Max   | Coord | Coord | Coord |
| 70th %ile Green (s)     | 23.5  | 23.5  | 75.0  | 75.0  | 75.0  |
| 70th %ile Term Code     | Max   | Max   | Coord | Coord | Coord |
| 50th %ile Green (s)     | 23.5  | 23.5  | 75.0  | 75.0  | 75.0  |
| 50th %ile Term Code     | Max   | Max   | Coord | Coord | Coord |
| 30th %ile Green (s)     | 23.5  | 23.5  | 75.0  | 75.0  | 75.0  |
| 30th %ile Term Code     | Max   | Max   | Coord | Coord | Coord |
| 10th %ile Green (s)     | 23.5  | 23.5  | 75.0  | 75.0  | 75.0  |
| 10th %ile Term Code     | Max   | Max   | Coord | Coord | Coord |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 15 (14%), Referenced to phase 1:NBSB, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
42: Van Dorn St & Sanger Ave/Richenbacher Ave

Existing 2010  
PM PEAK

| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT  | SBR   |
|---------------------|------|-------|-------|------|-------|------|-------|-------|------|-------|------|-------|
| Lane Configurations |      |       |       |      |       |      |       |       |      |       |      |       |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12    | 12   | 12    |
| Grade (%)           |      | 0%    |       |      | 0%    |      |       | 0%    |      |       | 0%   |       |
| Storage Length (ft) | 0    |       | 0     | 0    |       | 0    | 390   |       | 0    | 140   |      | 0     |
| Storage Lanes       | 0    |       | 1     | 0    |       | 0    | 1     |       | 0    | 1     |      | 0     |
| Taper Length (ft)   | 50   |       |       | 50   |       |      | 50    |       |      | 50    |      |       |
| 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     |      |       |       |      | 0.99  |      |       | 1.00  |      |       |      |       |
| Frt                 |      |       | 0.850 |      | 0.965 |      |       | 0.993 |      |       |      | 0.989 |
| Flt Protected       |      | 0.976 |       |      | 0.991 |      | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (prot)   | 0    | 1818  | 1583  | 0    | 1772  | 0    | 1770  | 3509  | 0    | 1770  | 3500 | 0     |
| Flt Permitted       |      | 0.713 |       |      | 0.787 |      | 0.103 |       |      | 0.442 |      |       |
| Satd. Flow (perm)   | 0    | 1328  | 1583  | 0    | 1407  | 0    | 192   | 3509  | 0    | 823   | 3500 | 0     |
| Right Turn on Red   |      |       | No    |      |       | Yes  |       | Yes   |      |       | Yes  |       |
| Satd. Flow (RTOR)   |      |       |       |      | 13    |      |       | 5     |      |       | 8    |       |
| Link Speed (mph)    |      | 25    |       |      | 25    |      |       | 35    |      |       | 35   |       |
| Link Distance (ft)  |      | 2026  |       |      | 1172  |      |       | 844   |      |       | 2951 |       |
| Travel Time (s)     |      | 55.3  |       |      | 32.0  |      |       | 16.4  |      |       | 57.5 |       |

Intersection Summary

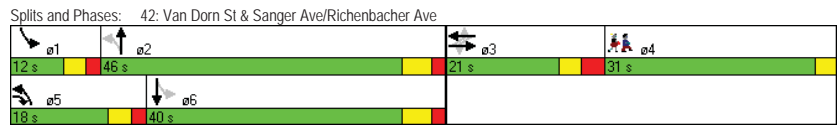
Area Type: Other

**Timings**  
**42: Van Dorn St & Sanger Ave/Richenbacher Ave**

Existing 2010  
 PM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | ø4   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations  |       | ↕     | ↕     |       | ↕     | ↕     | ↕     | ↕     | ↕     |      |
| Volume (vph)         | 75    | 80    | 445   | 20    | 65    | 285   | 495   | 40    | 1305  |      |
| Turn Type            | Perm  | NA    | Over  | Perm  | NA    | pm+pt | NA    | pm+pt | NA    |      |
| Protected Phases     |       | 3     | 5     |       | 3     | 5     | 2     | 1     | 6     | 4    |
| Permitted Phases     |       | 3     |       | 3     |       | 2     |       | 6     |       |      |
| Detector Phase       | 3     | 3     | 5     | 3     | 3     | 5     | 2     | 1     | 6     |      |
| Switch Phase         |       |       |       |       |       |       |       |       |       |      |
| Minimum Initial (s)  | 10.0  | 10.0  | 8.0   | 10.0  | 10.0  | 8.0   | 10.0  | 4.0   | 10.0  | 1.0  |
| Minimum Split (s)    | 16.0  | 16.0  | 13.0  | 16.0  | 16.0  | 13.0  | 16.0  | 9.0   | 16.0  | 30.0 |
| Total Split (s)      | 21.0  | 21.0  | 18.0  | 21.0  | 21.0  | 18.0  | 46.0  | 12.0  | 40.0  | 31.0 |
| Total Split (%)      | 19.1% | 19.1% | 16.4% | 19.1% | 19.1% | 16.4% | 41.8% | 10.9% | 36.4% | 28%  |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   | 3.0  |
| All-Red Time (s)     | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.0  |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -5.0  |      |
| Total Lost Time (s)  | 6.0   | 6.0   | 5.0   | 6.0   | 6.0   | 5.0   | 6.0   | 5.0   | 1.0   |      |
| Lead/Lag             | Lead  | Lead  | Lead  | Lead  | Lead  | Lead  | Lag   | Lead  | Lag   | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |      |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max | None  |      |
| Act Effct Green (s)  |       | 15.0  | 44.0  |       | 15.0  | 84.0  | 75.5  | 42.2  | 39.0  |      |
| Actuated g/C Ratio   |       | 0.14  | 0.40  |       | 0.14  | 0.76  | 0.69  | 0.38  | 0.35  |      |
| v/c Ratio            |       | 0.92  | 0.76  |       | 0.61  | 0.39  | 0.23  | 0.11  | 1.21  |      |
| Control Delay        |       | 97.4  | 37.5  |       | 53.8  | 8.6   | 1.5   | 16.4  | 137.1 |      |
| Queue Delay          |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      |
| Total Delay          |       | 97.4  | 37.5  |       | 53.8  | 8.6   | 1.5   | 16.4  | 137.1 |      |
| LOS                  |       | F     | D     |       | D     | A     | A     | B     | F     |      |
| Approach Delay       |       | 53.0  |       |       | 53.8  |       | 4.0   |       | 133.7 |      |
| Approach LOS         |       | D     |       |       | D     |       | A     |       | F     |      |

**Intersection Summary**  
 Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 10 (9%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.21  
 Intersection Signal Delay: 79.1  
 Intersection LOS: E  
 Intersection Capacity Utilization 90.6%  
 ICU Level of Service E  
 Analysis Period (min) 15



**Phasings**  
**42: Van Dorn St & Sanger Ave/Richenbacher Ave**

Existing 2010  
 PM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | ø4   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Protected Phases        |       | 3     | 5     |       | 3     | 5     | 2     | 1     | 6     | 4    |
| Permitted Phases        |       | 3     |       | 3     |       | 2     |       | 6     |       |      |
| Minimum Initial (s)     | 10.0  | 10.0  | 8.0   | 10.0  | 10.0  | 8.0   | 10.0  | 4.0   | 10.0  | 1.0  |
| Minimum Split (s)       | 16.0  | 16.0  | 13.0  | 16.0  | 16.0  | 13.0  | 16.0  | 9.0   | 16.0  | 30.0 |
| Total Split (s)         | 21.0  | 21.0  | 18.0  | 21.0  | 21.0  | 18.0  | 46.0  | 12.0  | 40.0  | 31.0 |
| Total Split (%)         | 19.1% | 19.1% | 16.4% | 19.1% | 19.1% | 16.4% | 41.8% | 10.9% | 36.4% | 28%  |
| Maximum Green (s)       | 15.0  | 15.0  | 13.0  | 15.0  | 15.0  | 13.0  | 40.0  | 7.0   | 34.0  | 28.0 |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   | 3.0  |
| All-Red Time (s)        | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.0  |
| Lead/Lag                | Lead  | Lead  | Lead  | Lead  | Lead  | Lead  | Lag   | Lead  | Lag   | Lag  |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |      |
| Vehicle Extension (s)   | 4.0   | 4.0   | 2.0   | 4.0   | 4.0   | 2.0   | 0.2   | 4.0   | 0.2   | 0.2  |
| Minimum Gap (s)         | 4.0   | 4.0   | 2.0   | 4.0   | 4.0   | 2.0   | 0.2   | 4.0   | 0.2   | 0.2  |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Recall Mode             | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max | None |
| Walk Time (s)           |       |       |       |       |       |       |       |       |       | 7.0  |
| Flash Dont Walk (s)     |       |       |       |       |       |       |       |       |       | 20.0 |
| Pedestrian Calls (#/hr) |       |       |       |       |       |       |       |       |       | 0    |
| 90th %ile Green (s)     | 15.0  | 15.0  | 44.0  | 15.0  | 15.0  | 44.0  | 70.0  | 8.0   | 34.0  | 0.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Coord | Gap   | Coord | Skip |
| 70th %ile Green (s)     | 15.0  | 15.0  | 44.0  | 15.0  | 15.0  | 44.0  | 70.5  | 7.5   | 34.0  | 0.0  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Coord | Gap   | Coord | Skip |
| 50th %ile Green (s)     | 15.0  | 15.0  | 44.0  | 15.0  | 15.0  | 44.0  | 70.8  | 7.2   | 34.0  | 0.0  |
| 50th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Coord | Gap   | Coord | Skip |
| 30th %ile Green (s)     | 15.0  | 15.0  | 44.0  | 15.0  | 15.0  | 44.0  | 83.0  | 0.0   | 34.0  | 0.0  |
| 30th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Coord | Skip  | Coord | Skip |
| 10th %ile Green (s)     | 15.0  | 15.0  | 44.0  | 15.0  | 15.0  | 44.0  | 83.0  | 0.0   | 34.0  | 0.0  |
| 10th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Coord | Skip  | Coord | Skip |

**Intersection Summary**  
 Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 10 (9%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

43: Van Dorn St/ Van Dorn St & Braddock Rd/ Braddock Rd

Existing 2010

PM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT  | WBR  | NBL  | NBT   | NBR   | SBL   | SBT  | SBR   |
|---------------------|-------|------|------|-------|------|------|------|-------|-------|-------|------|-------|
| Lane Configurations | ↔     | ↕    | ↔    | ↔     | ↕    | ↔    | ↔    | ↕     | ↔     | ↔     | ↕    | ↔     |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12   | 12   | 12   | 12    | 12    | 12    | 12   | 12    |
| Grade (%)           | 0%    |      | 0%   |       | 0%   |      | 0%   |       | 0%    |       | 0%   |       |
| Storage Length (ft) | 40    |      | 0    | 140   |      | 0    | 0    |       | 0     | 0     |      | 0     |
| Storage Lanes       | 1     |      | 0    | 1     |      | 0    | 0    |       | 0     | 0     |      | 0     |
| Taper Length (ft)   | 50    |      |      | 50    |      |      | 50   |       |       | 50    |      |       |
| Lane Util. Factor   | 1.00  | 0.95 | 0.95 | 1.00  | 0.95 | 0.95 | 0.95 | 0.95  | 0.95  | 0.95  | 0.95 | 0.95  |
| Ped Bike Factor     | 0.98  |      |      |       |      |      |      | 1.00  |       | 0.994 |      |       |
| Frt                 | 0.897 |      |      | 0.990 |      |      |      | 0.951 |       | 0.999 |      |       |
| Flt Protected       | 0.950 |      |      | 0.950 |      |      |      |       | 0.978 |       |      | 0.999 |
| Satd. Flow (prot)   | 1770  | 3104 | 0    | 1770  | 3504 | 0    | 0    | 3276  | 0     | 0     | 3514 | 0     |
| Flt Permitted       | 0.599 |      |      | 0.122 |      |      |      |       | 0.542 |       |      | 0.937 |
| Satd. Flow (perm)   | 1116  | 3104 | 0    | 227   | 3504 | 0    | 0    | 1816  | 0     | 0     | 3296 | 0     |
| Right Turn on Red   | Yes   |      | Yes  |       |      |      | Yes  |       | Yes   |       |      |       |
| Satd. Flow (RTOR)   | 153   |      |      | 6     |      |      |      | 99    |       | 5     |      |       |
| Link Speed (mph)    | 35    |      |      | 35    |      |      |      | 35    |       | 35    |      |       |
| Link Distance (ft)  | 1164  |      |      | 1277  |      |      |      | 2586  |       | 1512  |      |       |
| Travel Time (s)     | 22.7  |      |      | 24.9  |      |      |      | 50.4  |       | 29.5  |      |       |

Intersection Summary

Area Type: Other

Timings

43: Van Dorn St/ Van Dorn St & Braddock Rd/ Braddock Rd

Existing 2010

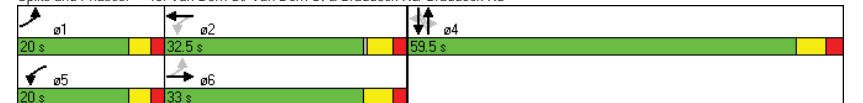
PM PEAK

| Lane Group           | EBL   | EBT    | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|--------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕      | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     |
| Volume (vph)         | 15    | 220    | 240   | 215   | 215   | 105   | 15    | 645   |
| Turn Type            | pm+pt | NA     | pm+pt | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 1     | 6      | 5     | 2     |       | 4     |       | 4     |
| Permitted Phases     | 6     |        | 2     |       | 4     |       | 4     |       |
| Detector Phase       | 1     | 6      | 5     | 2     | 4     | 4     | 4     | 4     |
| Switch Phase         |       |        |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0   | 5.0   | 10.0  | 7.0   | 7.0   | 7.0   | 7.0   |
| Minimum Split (s)    | 10.0  | 29.0   | 10.0  | 28.5  | 34.5  | 34.5  | 34.5  | 34.5  |
| Total Split (s)      | 20.0  | 33.0   | 20.0  | 32.5  | 59.5  | 59.5  | 59.5  | 59.5  |
| Total Split (%)      | 17.8% | 29.3%  | 17.8% | 28.9% | 52.9% | 52.9% | 52.9% | 52.9% |
| Yellow Time (s)      | 3.0   | 4.0    | 3.0   | 3.5   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.0    | 2.0   | 2.0   | 2.5   | 2.5   | 2.5   | 2.5   |
| Lost Time Adjust (s) | 0.0   | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.0   | 6.0    | 5.0   | 5.5   | 6.5   | 6.5   | 6.5   | 6.5   |
| Lead/Lag             | Lead  | Lag    | Lead  | Lag   |       |       |       |       |
| Lead-Lag Optimize?   |       |        |       |       |       |       |       |       |
| Recall Mode          | None  | Max    | None  | Max   | Max   | Max   | Max   | Max   |
| Act Effct Green (s)  | 34.1  | 27.0   | 47.9  | 42.7  |       | 53.0  |       | 53.0  |
| Actuated g/C Ratio   | 0.30  | 0.24   | 0.43  | 0.38  |       | 0.47  |       | 0.47  |
| v/c Ratio            | 0.04  | 1.08dr | 0.86  | 0.19  |       | 0.56  |       | 0.48  |
| Control Delay        | 19.9  | 46.3   | 53.3  | 24.4  |       | 19.7  |       | 21.4  |
| Queue Delay          | 0.0   | 0.0    | 0.0   | 0.0   |       | 0.0   |       | 0.0   |
| Total Delay          | 19.9  | 46.3   | 53.3  | 24.4  |       | 19.7  |       | 21.4  |
| LOS                  | B     | D      | D     | C     |       | B     |       | C     |
| Approach Delay       | 45.7  |        | 39.2  |       | 19.7  |       | 21.4  |       |
| Approach LOS         | D     |        | D     |       | B     |       | C     |       |

Intersection Summary

Cycle Length: 112.5  
 Actuated Cycle Length: 112.4  
 Natural Cycle Length: 75  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.89  
 Intersection Signal Delay: 32.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 98.7%  
 ICU Level of Service F  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

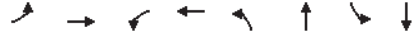
Splits and Phases: 43: Van Dorn St/ Van Dorn St & Braddock Rd/ Braddock Rd



Phasings

43: Van Dorn St/ Van Dorn St & Braddock Rd/ Braddock Rd

Existing 2010  
PM PEAK



| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 1     | 6     | 5     | 2     |       | 4     |       | 4     |
| Permitted Phases        | 6     |       | 2     |       | 4     |       | 4     |       |
| Minimum Initial (s)     | 5.0   | 10.0  | 5.0   | 10.0  | 7.0   | 7.0   | 7.0   | 7.0   |
| Minimum Split (s)       | 10.0  | 29.0  | 10.0  | 28.5  | 34.5  | 34.5  | 34.5  | 34.5  |
| Total Split (s)         | 20.0  | 33.0  | 20.0  | 32.5  | 59.5  | 59.5  | 59.5  | 59.5  |
| Total Split (%)         | 17.8% | 29.3% | 17.8% | 28.9% | 52.9% | 52.9% | 52.9% | 52.9% |
| Maximum Green (s)       | 15.0  | 27.0  | 15.0  | 27.0  | 53.0  | 53.0  | 53.0  | 53.0  |
| Yellow Time (s)         | 3.0   | 4.0   | 3.0   | 3.5   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.5   | 2.5   | 2.5   | 2.5   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 0.2   | 3.0   | 0.2   | 2.0   | 2.0   | 2.0   | 2.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | Max   | None  | Max   | Max   | Max   | Max   | Max   |
| Walk Time (s)           |       | 7.0   |       | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       | 16.0  |       | 16.0  | 21.0  | 21.0  | 21.0  | 21.0  |
| Pedestrian Calls (#/hr) |       | 0     |       | 0     | 0     | 0     | 0     | 0     |
| 90th %ile Green (s)     | 7.1   | 27.0  | 15.0  | 35.4  | 53.0  | 53.0  | 53.0  | 53.0  |
| 90th %ile Term Code     | Gap   | MaxR  | Max   | Hold  | MaxR  | MaxR  | MaxR  | MaxR  |
| 70th %ile Green (s)     | 6.5   | 27.0  | 15.0  | 36.0  | 53.0  | 53.0  | 53.0  | 53.0  |
| 70th %ile Term Code     | Gap   | MaxR  | Max   | Hold  | MaxR  | MaxR  | MaxR  | MaxR  |
| 50th %ile Green (s)     | 0.0   | 27.0  | 15.0  | 47.5  | 53.0  | 53.0  | 53.0  | 53.0  |
| 50th %ile Term Code     | Skip  | MaxR  | Max   | Hold  | MaxR  | MaxR  | MaxR  | MaxR  |
| 30th %ile Green (s)     | 0.0   | 27.0  | 15.0  | 47.5  | 53.0  | 53.0  | 53.0  | 53.0  |
| 30th %ile Term Code     | Skip  | MaxR  | Max   | Hold  | MaxR  | MaxR  | MaxR  | MaxR  |
| 10th %ile Green (s)     | 0.0   | 27.0  | 14.4  | 46.9  | 53.0  | 53.0  | 53.0  | 53.0  |
| 10th %ile Term Code     | Skip  | MaxR  | Gap   | Hold  | MaxR  | MaxR  | MaxR  | MaxR  |

Intersection Summary

|                                      |
|--------------------------------------|
| Cycle Length: 112.5                  |
| Actuated Cycle Length: 112.4         |
| Control Type: Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: 112.5      |
| 70th %ile Actuated Cycle: 112.5      |
| 50th %ile Actuated Cycle: 112.5      |
| 30th %ile Actuated Cycle: 112.5      |
| 10th %ile Actuated Cycle: 111.9      |

Lanes and Geometrics

47: Van Dorn St/Van Dorn St & Taney Ave

Existing 2010  
PM PEAK



| Lane Group          | WBL   | WBR   | NBT   | NBR  | SBL   | SBT  |
|---------------------|-------|-------|-------|------|-------|------|
| Lane Configurations | ↔     | ↔     | ↕     | ↕    | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |       | 0%    |      |       | 0%   |
| Storage Length (ft) | 0     | 85    |       | 0    | 180   |      |
| Storage Lanes       | 1     | 1     |       | 0    | 1     |      |
| Taper Length (ft)   | 50    |       |       |      | 50    |      |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95  | 0.95 | 1.00  | 0.95 |
| Ped Bike Factor     | 0.99  | 0.98  | 1.00  |      |       |      |
| Frt                 |       | 0.850 | 0.977 |      |       |      |
| Flt Protected       | 0.950 |       |       |      | 0.950 |      |
| Satd. Flow (prot)   | 1770  | 1583  | 3444  | 0    | 1770  | 3539 |
| Flt Permitted       | 0.950 |       |       |      | 0.950 |      |
| Satd. Flow (perm)   | 1760  | 1545  | 3444  | 0    | 1770  | 3539 |
| Right Turn on Red   |       | Yes   |       | Yes  |       |      |
| Satd. Flow (RTOR)   |       | 59    | 34    |      |       |      |
| Link Speed (mph)    |       | 25    | 35    |      |       | 35   |
| Link Distance (ft)  |       | 1013  | 719   |      |       | 844  |
| Travel Time (s)     |       | 27.6  | 14.0  |      |       | 16.4 |

Intersection Summary

|            |       |
|------------|-------|
| Area Type: | Other |
|------------|-------|

Timings  
47: Van Dorn St/Van Dorn St & Taney Ave

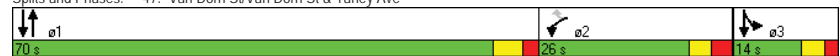
Existing 2010  
PM PEAK

| Lane Group           | WBL   | WBR   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↑↓    | ↔     | ↑↓    |
| Volume (vph)         | 145   | 55    | 750   | 95    | 1675  |
| Turn Type            | NA    | Perm  | NA    | Prot  | NA    |
| Protected Phases     | 2     |       | 1     | 3     | 1 3   |
| Permitted Phases     |       | 2     |       |       |       |
| Detector Phase       | 2     | 2     | 1     | 3     | 1 3   |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 10.0  | 4.0   |       |
| Minimum Split (s)    | 25.0  | 25.0  | 16.0  | 9.0   |       |
| Total Split (s)      | 26.0  | 26.0  | 70.0  | 14.0  | 84.0  |
| Total Split (%)      | 23.6% | 23.6% | 63.6% | 12.7% | 76.4% |
| Yellow Time (s)      | 3.0   | 3.0   | 4.0   | 3.0   |       |
| All-Red Time (s)     | 3.0   | 3.0   | 2.0   | 2.0   |       |
| Lost Time Adjust (s) | -3.0  | -3.0  | -3.0  | -2.0  | -3.0  |
| Total Lost Time (s)  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag             | Lag   | Lag   | Lead  |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |
| Recall Mode          | None  | None  | C-Max | None  |       |
| Act Effct Green (s)  | 17.0  | 17.0  | 67.0  | 17.0  | 87.0  |
| Actuated g/C Ratio   | 0.15  | 0.15  | 0.61  | 0.15  | 0.79  |
| v/c Ratio            | 0.57  | 0.20  | 0.45  | 0.37  | 0.64  |
| Control Delay        | 50.6  | 11.4  | 11.9  | 26.0  | 18.0  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.5   |
| Total Delay          | 50.6  | 11.4  | 11.9  | 26.0  | 18.5  |
| LOS                  | D     | B     | B     | C     | B     |
| Approach Delay       | 39.9  |       | 11.9  |       | 18.9  |
| Approach LOS         | D     |       | B     |       | B     |

Intersection Summary

|   |
|---|
| Cycle Length: 110   |
| Actuated Cycle Length: 110                                    |
| Offset: 26 (24%), Referenced to phase 1:NBSB, Start of Yellow |
| Natural Cycle: 60   |
| Control Type: Actuated-Coordinated                            |
| Maximum v/c Ratio: 0.64                                       |
| Intersection Signal Delay: 18.2                               |
| Intersection LOS: B   |
| Intersection Capacity Utilization 62.6%                       |
| ICU Level of Service B  |
| Analysis Period (min) 15                                      |

Splits and Phases: 47: Van Dorn St/Van Dorn St & Taney Ave



Phasings  
47: Van Dorn St/Van Dorn St & Taney Ave

Existing 2010  
PM PEAK

| Lane Group              | WBL   | WBR   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|
| Protected Phases        | 2     |       | 1     | 3     | 1 3   |
| Permitted Phases        |       | 2     |       |       |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 10.0  | 4.0   |       |
| Minimum Split (s)       | 25.0  | 25.0  | 16.0  | 9.0   |       |
| Total Split (s)         | 26.0  | 26.0  | 70.0  | 14.0  | 84.0  |
| Total Split (%)         | 23.6% | 23.6% | 63.6% | 12.7% | 76.4% |
| Maximum Green (s)       | 20.0  | 20.0  | 64.0  | 9.0   |       |
| Yellow Time (s)         | 3.0   | 3.0   | 4.0   | 3.0   |       |
| All-Red Time (s)        | 3.0   | 3.0   | 2.0   | 2.0   |       |
| Lead/Lag                | Lag   | Lag   | Lead  |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 2.0   | 0.2   | 2.0   |       |
| Minimum Gap (s)         | 2.0   | 2.0   | 0.2   | 2.0   |       |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Recall Mode             | None  | None  | C-Max | None  |       |
| Walk Time (s)           | 4.0   | 4.0   |       |       |       |
| Flash Dont Walk (s)     | 15.0  | 15.0  |       |       |       |
| Pedestrian Calls (#/hr) | 0     | 0     |       |       |       |
| 90th %ile Green (s)     | 19.6  | 19.6  | 64.0  | 9.4   |       |
| 90th %ile Term Code     | Gap   | Gap   | Coord | Max   |       |
| 70th %ile Green (s)     | 16.4  | 16.4  | 64.0  | 12.6  |       |
| 70th %ile Term Code     | Gap   | Gap   | Coord | Max   |       |
| 50th %ile Green (s)     | 14.0  | 14.0  | 64.0  | 15.0  |       |
| 50th %ile Term Code     | Gap   | Gap   | Coord | Max   |       |
| 30th %ile Green (s)     | 11.7  | 11.7  | 64.0  | 17.3  |       |
| 30th %ile Term Code     | Gap   | Gap   | Coord | Max   |       |
| 10th %ile Green (s)     | 8.4   | 8.4   | 64.0  | 20.6  |       |
| 10th %ile Term Code     | Gap   | Gap   | Coord | Max   |       |

Intersection Summary

|   |
|---|
| Cycle Length: 110   |
| Actuated Cycle Length: 110                                    |
| Offset: 26 (24%), Referenced to phase 1:NBSB, Start of Yellow |
| Control Type: Actuated-Coordinated                            |

Lanes and Geometrics  
51: Beauregard St & Sanger Ave

Existing 2010  
PM PEAK

| Lane Group          | EBL  | EBT   | EBR  | WBL  | WBT   | WBR  | NBL   | NBT  | NBR   | SBL   | SBT  | SBR   |
|---------------------|------|-------|------|------|-------|------|-------|------|-------|-------|------|-------|
| Lane Configurations |      | ↔     |      |      | ↔     | ↔    | ↔     | ↔    |       | ↔     | ↔    |       |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12    | 12   | 12   | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12    |
| Grade (%)           |      | 0%    |      |      | 0%    |      | 0%    |      | 0%    |       | 0%   |       |
| Storage Length (ft) | 0    |       | 0    | 0    |       | 0    | 175   |      | 0     | 175   |      | 0     |
| Storage Lanes       | 0    |       | 0    | 0    |       | 1    | 1     |      | 0     | 1     |      | 0     |
| Taper Length (ft)   | 50   |       |      | 50   |       |      | 50    |      |       | 50    |      |       |
| Lane Util. Factor   | 0.95 | 0.95  | 0.95 | 1.00 | 1.00  | 1.00 | 1.00  | 0.95 | 0.95  | 1.00  | 0.95 | 0.95  |
| Ped Bike Factor     |      | 0.98  |      |      |       | 0.96 |       | 0.99 |       |       | 1.00 |       |
| Frt                 |      | 0.941 |      |      |       |      | 0.850 |      | 0.957 |       |      | 0.991 |
| Flt Protected       |      | 0.987 |      |      | 0.962 |      | 0.950 |      |       | 0.950 |      |       |
| Satd. Flow (prot)   | 0    | 3212  | 0    | 0    | 1792  | 1583 | 1770  | 3367 | 0     | 1770  | 3503 | 0     |
| Flt Permitted       |      | 0.594 |      |      | 0.962 |      | 0.130 |      |       | 0.272 |      |       |
| Satd. Flow (perm)   | 0    | 1933  | 0    | 0    | 1792  | 1517 | 242   | 3367 | 0     | 507   | 3503 | 0     |
| Right Turn on Red   |      |       | Yes  |      |       | Yes  |       | Yes  |       | Yes   |      | Yes   |
| Satd. Flow (RTOR)   |      | 67    |      |      |       | 133  |       | 35   |       |       | 4    |       |
| Link Speed (mph)    |      | 25    |      |      | 25    |      |       | 35   |       |       | 35   |       |
| Link Distance (ft)  |      | 941   |      |      | 2026  |      |       | 947  |       |       | 1932 |       |
| Travel Time (s)     |      | 25.7  |      |      | 55.3  |      |       | 18.4 |       |       | 37.6 |       |

Intersection Summary

Area Type: Other

Timings  
51: Beauregard St & Sanger Ave

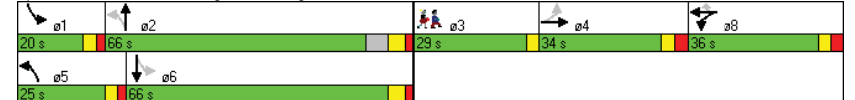
Existing 2010  
PM PEAK

| Lane Group           | EBL   | EBT   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   | ø3   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations  |       | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |      |
| Volume (vph)         | 50    | 65    | 55    | 135   | 75    | 455   | 370   | 995   |      |
| Turn Type            | Perm  | NA    | NA    | Perm  | pm+pt | NA    | pm+pt | NA    |      |
| Protected Phases     |       | 4     | 8     |       | 5     | 2     | 1     | 6     | 3    |
| Permitted Phases     | 4     |       |       | 8     | 2     |       |       | 6     |      |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 1     | 6     |      |
| Switch Phase         |       |       |       |       |       |       |       |       |      |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0  |
| Minimum Split (s)    | 20.0  | 20.0  | 20.0  | 20.0  | 9.0   | 20.0  | 11.0  | 20.0  | 29.0 |
| Total Split (s)      | 34.0  | 34.0  | 36.0  | 36.0  | 25.0  | 66.0  | 20.0  | 66.0  | 29.0 |
| Total Split (%)      | 17.9% | 17.9% | 18.9% | 18.9% | 13.2% | 34.7% | 10.5% | 34.7% | 15%  |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   | 3.0  |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.0  |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -5.0  |      |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 6.0   | 5.0   | 1.0   |      |
| Lead/Lag             | Lag   | Lag   |       |       | Lead  | Lag   | Lead  | Lag   | Lead |
| Lead-Lag Optimize?   | Yes   | Yes   |       |       | Yes   | Yes   | Yes   | Yes   | Yes  |
| Recall Mode          | None  | None  | None  | None  | None  | Max   | None  | Max   | None |
| Act Effct Green (s)  |       | 16.5  | 28.1  | 28.1  | 70.2  | 60.2  | 80.7  | 71.2  |      |
| Actuated g/C Ratio   |       | 0.12  | 0.20  | 0.20  | 0.49  | 0.42  | 0.56  | 0.50  |      |
| v/c Ratio            |       | 0.73  | 0.76  | 0.36  | 0.38  | 0.48  | 0.95  | 0.65  |      |
| Control Delay        |       | 55.9  | 69.7  | 12.4  | 21.1  | 30.5  | 56.0  | 30.2  |      |
| Queue Delay          |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      |
| Total Delay          |       | 55.9  | 69.7  | 12.4  | 21.1  | 30.5  | 56.0  | 30.2  |      |
| LOS                  |       | E     | E     | B     | C     | C     | E     | C     |      |
| Approach Delay       |       | 55.9  | 49.7  |       |       | 29.5  |       | 36.8  |      |
| Approach LOS         |       | E     | D     |       |       | C     |       | D     |      |

Intersection Summary

Cycle Length: 190  
 Actuated Cycle Length: 142.9  
 Natural Cycle: 140  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.95  
 Intersection Signal Delay: 38.1  
 Intersection Capacity Utilization 78.7%  
 Analysis Period (min) 15  
 Intersection LOS: D  
 ICU Level of Service D

Splits and Phases: 51: Beauregard St & Sanger Ave



Phasings  
51: Beauregard St & Sanger Ave

Existing 2010  
PM PEAK



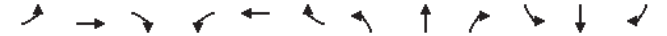
| Lane Group              | EBL   | EBT   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   | Ø3   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Protected Phases        |       | 4     | 8     |       | 5     | 2     | 1     | 6     | 3    |
| Permitted Phases        | 4     |       |       | 8     | 2     |       | 6     |       |      |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0  |
| Minimum Split (s)       | 20.0  | 20.0  | 20.0  | 20.0  | 9.0   | 20.0  | 11.0  | 20.0  | 29.0 |
| Total Split (s)         | 34.0  | 34.0  | 36.0  | 36.0  | 25.0  | 66.0  | 20.0  | 66.0  | 29.0 |
| Total Split (%)         | 17.9% | 17.9% | 18.9% | 18.9% | 13.2% | 34.7% | 10.5% | 34.7% | 15%  |
| Maximum Green (s)       | 28.0  | 28.0  | 30.0  | 30.0  | 20.0  | 60.0  | 15.0  | 60.0  | 26.0 |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   | 3.0  |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.0  |
| Lead/Lag                | Lag   | Lag   |       |       | Lead  | Lag   | Lead  | Lag   | Lead |
| Lead-Lag Optimize?      | Yes   | Yes   |       |       | Yes   | Yes   | Yes   | Yes   | Yes  |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   | 3.0  |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Recall Mode             | None  | None  | None  | None  | None  | Max   | None  | Max   | None |
| Walk Time (s)           |       |       |       |       |       |       |       |       | 8.0  |
| Flash Dont Walk (s)     |       |       |       |       |       |       |       |       | 18.0 |
| Pedestrian Calls (#/hr) |       |       |       |       |       |       |       |       | 0    |
| 90th %ile Green (s)     | 23.9  | 23.9  | 30.0  | 30.0  | 12.7  | 60.0  | 15.0  | 62.3  | 0.0  |
| 90th %ile Term Code     | Gap   | Gap   | Max   | Max   | Gap   | MaxR  | Max   | Hold  | Skip |
| 70th %ile Green (s)     | 19.5  | 19.5  | 30.0  | 30.0  | 9.9   | 60.0  | 15.0  | 65.1  | 0.0  |
| 70th %ile Term Code     | Gap   | Gap   | Max   | Max   | Gap   | MaxR  | Max   | Hold  | Skip |
| 50th %ile Green (s)     | 16.5  | 16.5  | 30.0  | 30.0  | 8.6   | 60.0  | 15.0  | 66.4  | 0.0  |
| 50th %ile Term Code     | Gap   | Gap   | Max   | Max   | Gap   | MaxR  | Max   | Hold  | Skip |
| 30th %ile Green (s)     | 13.7  | 13.7  | 28.1  | 28.1  | 7.7   | 60.0  | 15.0  | 67.3  | 0.0  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | MaxR  | Max   | Hold  | Skip |
| 10th %ile Green (s)     | 9.8   | 9.8   | 22.8  | 22.8  | 6.5   | 60.0  | 15.0  | 68.5  | 0.0  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | MaxR  | Max   | Hold  | Skip |

Intersection Summary

Cycle Length: 190  
 Actuated Cycle Length: 142.9  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 151.9  
 70th %ile Actuated Cycle: 147.5  
 50th %ile Actuated Cycle: 144.5  
 30th %ile Actuated Cycle: 139.8  
 10th %ile Actuated Cycle: 130.6

Lanes and Geometrics  
52: Beauregard St & Rayburn Ave

Existing 2010  
PM PEAK



| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT   | WBR   | NBL   | NBT   | NBR  | SBL   | SBT  | SBR   |
|---------------------|------|-------|-------|------|-------|-------|-------|-------|------|-------|------|-------|
| Lane Configurations |      | ↔     | ↔     |      | ↔     | ↔     | ↔     | ↔     | ↔    | ↔     | ↔    | ↔     |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12    | 12   | 12    | 12   | 12    |
| Grade (%)           |      | 0%    |       |      | 0%    |       |       | 0%    |      |       | 0%   |       |
| Storage Length (ft) | 0    |       | 0     | 0    |       | 0     | 190   |       | 0    | 175   |      | 0     |
| Storage Lanes       | 0    |       | 1     | 0    |       | 1     | 1     |       | 0    | 1     |      | 0     |
| Taper Length (ft)   | 50   |       |       | 50   |       |       | 50    |       |      | 50    |      |       |
| 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     |      |       | 0.96  |      |       | 0.97  |       | 1.00  |      |       |      | 0.99  |
| Frt                 |      |       | 0.850 |      |       | 0.850 |       | 0.995 |      |       |      | 0.982 |
| Flt Protected       |      | 0.955 |       |      | 0.959 |       | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (prot)   | 0    | 1779  | 1583  | 0    | 1786  | 1583  | 1770  | 3513  | 0    | 1770  | 3452 | 0     |
| Flt Permitted       |      | 0.680 |       |      | 0.444 |       | 0.064 |       |      | 0.391 |      |       |
| Satd. Flow (perm)   | 0    | 1267  | 1526  | 0    | 827   | 1531  | 119   | 3513  | 0    | 728   | 3452 | 0     |
| Right Turn on Red   |      |       | Yes   |      |       | Yes   |       |       | Yes  |       |      | Yes   |
| Satd. Flow (RTOR)   |      |       | 54    |      |       | 27    |       | 5     |      | 21    |      |       |
| Link Speed (mph)    |      | 25    |       |      | 25    |       |       | 35    |      | 35    |      |       |
| Link Distance (ft)  |      | 932   |       |      | 601   |       |       | 749   |      | 719   |      |       |
| Travel Time (s)     |      | 25.4  |       |      | 16.4  |       |       | 14.6  |      | 14.0  |      |       |

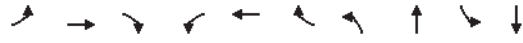
Intersection Summary

Area Type: Other



Timings  
52: Beauregard St & Rayburn Ave

Existing 2010  
PM PEAK



| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       | ↕     | ↕     |       | ↕     | ↕     | ↕     | ↕     | ↕     | ↕     |
| Volume (vph)         | 170   | 10    | 50    | 65    | 10    | 25    | 50    | 605   | 15    | 1415  |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | Perm  | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     |       | 4     |       |       | 4     |       | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 4     | 4     |       | 4     | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 9.0   | 22.0  | 9.0   | 22.0  |
| Total Split (s)      | 30.0  | 30.0  | 30.0  | 30.0  | 30.0  | 30.0  | 15.0  | 75.0  | 15.0  | 75.0  |
| Total Split (%)      | 25.0% | 25.0% | 25.0% | 25.0% | 25.0% | 25.0% | 12.5% | 62.5% | 12.5% | 62.5% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max | None  |
| Act Effct Green (s)  | 21.8  | 21.8  |       | 21.8  | 21.8  | 86.3  | 82.3  | 82.9  | 77.2  |       |
| Actuated g/C Ratio   | 0.18  | 0.18  |       | 0.18  | 0.18  | 0.72  | 0.69  | 0.69  | 0.64  |       |
| v/c Ratio            | 0.84  | 0.17  |       | 0.54  | 0.09  | 0.31  | 0.28  | 0.03  | 0.78  |       |
| Control Delay        | 77.1  | 11.7  |       | 57.6  | 14.3  | 16.0  | 7.2   | 1.4   | 13.9  |       |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.1   |       |
| Total Delay          | 77.1  | 11.7  |       | 57.6  | 14.3  | 16.0  | 7.2   | 1.4   | 14.0  |       |
| LOS                  | E     | B     |       | E     | B     | B     | A     | A     | B     |       |
| Approach Delay       | 62.8  |       |       | 46.8  |       |       | 7.9   |       | 13.9  |       |
| Approach LOS         | E     |       |       | D     |       |       | A     |       | B     |       |


| Intersection Summary               |   |
|------------------------------------|---|
| Cycle Length:                      | 120   |
| Actuated Cycle Length:             | 120   |
| Offset:                            | 68 (57%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green |
| Natural Cycle:                     | 90  |
| Control Type:                      | Actuated-Coordinated  |
| Maximum v/c Ratio:                 | 0.84  |
| Intersection Signal Delay:         | 17.9  |
| Intersection LOS:                  | B   |
| Intersection Capacity Utilization: | 81.6%   |
| ICU Level of Service D             |   |
| Analysis Period (min):             | 15  |

Splits and Phases: 52: Beauregard St & Rayburn Ave



Phasings  
52: Beauregard St & Rayburn Ave

Existing 2010  
PM PEAK



| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 4     |       |       | 4     |       | 5     | 2     | 1     | 6     |
| Permitted Phases        | 4     |       | 4     | 4     |       | 4     |       |       | 6     |       |
| Minimum Initial (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)       | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 9.0   | 22.0  | 9.0   | 22.0  |
| Total Split (s)         | 30.0  | 30.0  | 30.0  | 30.0  | 30.0  | 30.0  | 15.0  | 75.0  | 15.0  | 75.0  |
| Total Split (%)         | 25.0% | 25.0% | 25.0% | 25.0% | 25.0% | 25.0% | 12.5% | 62.5% | 12.5% | 62.5% |
| Maximum Green (s)       | 24.5  | 24.5  | 24.5  | 24.5  | 24.5  | 24.5  | 10.0  | 69.0  | 10.0  | 69.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 0.2   | 3.0   | 0.2   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 0.2   | 3.0   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Walk Time (s)           | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Flash Dont Walk (s)     | 18.0  | 18.0  | 18.0  | 18.0  | 18.0  | 18.0  |       | 12.0  |       | 12.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     | 0     |       | 0     |       | 0     |
| 90th %ile Green (s)     | 24.5  | 24.5  | 24.5  | 24.5  | 24.5  | 24.5  | 8.0   | 72.7  | 6.3   | 71.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Gap   | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 24.5  | 24.5  | 24.5  | 24.5  | 24.5  | 24.5  | 7.0   | 73.0  | 6.0   | 72.0  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Gap   | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 24.2  | 24.2  | 24.2  | 24.2  | 24.2  | 24.2  | 6.5   | 84.3  | 0.0   | 72.8  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Skip  | Coord |
| 30th %ile Green (s)     | 20.5  | 20.5  | 20.5  | 20.5  | 20.5  | 20.5  | 6.0   | 88.0  | 0.0   | 77.0  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Skip  | Coord |
| 10th %ile Green (s)     | 15.2  | 15.2  | 15.2  | 15.2  | 15.2  | 15.2  | 0.0   | 93.3  | 0.0   | 93.3  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Skip  | Coord | Skip  | Coord |

| Intersection Summary   |   |
|------------------------|---|
| Cycle Length:          | 120   |
| Actuated Cycle Length: | 120   |
| Offset:                | 68 (57%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green |
| Control Type:          | Actuated-Coordinated  |

Lanes and Geometrics  
53: Beauregard St & Reading Ave

Existing 2010  
PM PEAK

| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT   | WBR   | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|
| Lane Configurations |      | ↔     | ↔     |      | ↔     | ↔     | ↔     | ↔    | ↔     | ↔     | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           |      | 0%    |       |      | 0%    |       |       | 0%   |       |       | 0%    |      |
| Storage Length (ft) | 0    |       | 0     | 0    |       | 0     | 150   |      | 125   | 170   |       | 0    |
| Storage Lanes       | 0    |       | 1     | 0    |       | 1     |       |      | 1     | 1     |       | 0    |
| Taper Length (ft)   | 50   |       |       | 50   |       |       | 50    |      |       | 50    |       |      |
| Lane Util. Factor   | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 0.95 |
| Ped Bike Factor     |      |       | 0.98  |      |       | 0.98  |       |      |       |       | 1.00  |      |
| Frt                 |      |       | 0.850 |      |       | 0.850 |       |      | 0.850 |       | 0.992 |      |
| Flt Protected       |      | 0.954 |       |      | 0.971 |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (prot)   | 0    | 1777  | 1583  | 0    | 1809  | 1583  | 1770  | 3539 | 1583  | 1770  | 3502  | 0    |
| Flt Permitted       |      | 0.714 |       |      | 0.798 |       | 0.106 |      |       | 0.458 |       |      |
| Satd. Flow (perm)   | 0    | 1330  | 1549  | 0    | 1486  | 1549  | 197   | 3539 | 1583  | 853   | 3502  | 0    |
| Right Turn on Red   |      |       | Yes   |      | Yes   |       | Yes   |      | Yes   |       | Yes   |      |
| Satd. Flow (RTOR)   |      |       | 81    |      | 81    |       |       |      | 18    |       | 9     |      |
| Link Speed (mph)    |      | 25    |       |      | 25    |       | 35    |      |       |       | 35    |      |
| Link Distance (ft)  |      | 1147  |       |      | 584   |       | 1932  |      |       |       | 749   |      |
| Travel Time (s)     |      | 31.3  |       |      | 15.9  |       | 37.6  |      |       |       | 14.6  |      |

Intersection Summary

Area Type: Other

Timings  
53: Beauregard St & Reading Ave

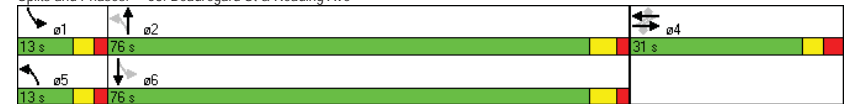
Existing 2010  
PM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR  | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| Lane Configurations  |       | ↔     | ↔     |       | ↔     | ↔     | ↔     | ↔     | ↔    | ↔     | ↔     |
| Volume (vph)         | 120   | 5     | 75    | 15    | 10    | 75    | 135   | 480   | 25   | 110   | 1340  |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | Perm  | pm+pt | NA    | NA   | pm+pt | NA    |
| Protected Phases     |       | 4     |       |       | 4     |       | 5     | 2     |      | 1     | 6     |
| Permitted Phases     | 4     |       | 4     | 4     |       | 4     | 2     |       |      | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 2     |      | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |      |       |       |
| Minimum Initial (s)  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 6.0   | 10.0  |      | 6.0   | 10.0  |
| Minimum Split (s)    | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 11.0  | 24.0  |      | 11.0  | 24.0  |
| Total Split (s)      | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 13.0  | 76.0  | 0.0  | 13.0  | 76.0  |
| Total Split (%)      | 25.8% | 25.8% | 25.8% | 25.8% | 25.8% | 25.8% | 10.8% | 63.3% | 0.0% | 10.8% | 63.3% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   |      | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   |      | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 6.0   | 4.0  | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       |       |       | Lead  | Lag   |      | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |      |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None  | C-Max |      | None  | C-Max |
| Act Effct Green (s)  | 17.4  | 17.4  |       | 17.4  | 17.4  | 17.4  | 87.5  | 78.3  | 0.0  | 85.7  | 77.4  |
| Actuated g/C Ratio   | 0.14  | 0.14  |       | 0.14  | 0.14  | 0.14  | 0.73  | 0.65  | 0.00 | 0.71  | 0.64  |
| v/c Ratio            | 0.69  | 0.28  |       | 0.13  | 0.28  | 0.58  | 0.22  | 1.50  | 0.18 | 0.67  |       |
| Control Delay        | 66.4  | 11.1  |       | 43.1  | 11.1  | 17.6  | 9.5   | 417.3 | 2.7  | 5.1   |       |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.1   |       |
| Total Delay          | 66.4  | 11.1  |       | 43.1  | 11.1  | 17.6  | 9.5   | 417.3 | 2.7  | 5.2   |       |
| LOS                  | E     | B     |       | D     | B     | B     | A     | F     | A    | A     |       |
| Approach Delay       | 45.6  |       |       | 19.1  |       |       | 27.2  |       |      | 5.1   |       |
| Approach LOS         | D     |       |       | B     |       |       | C     |       |      | A     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 72 (60%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.50  
 Intersection Signal Delay: 14.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 76.4%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 53: Beauregard St & Reading Ave



Phasings  
53: Beauregard St & Reading Ave

Existing 2010  
PM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR  | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| Protected Phases        | 4     |       | 4     |       | 4     |       | 5     |       | 2    |       | 6     |
| Permitted Phases        | 4     |       | 4     | 4     |       | 4     |       | 2     |      | 6     |       |
| Minimum Initial (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 6.0   | 10.0  |      | 6.0   | 10.0  |
| Minimum Split (s)       | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 11.0  | 24.0  |      | 11.0  | 24.0  |
| Total Split (s)         | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 13.0  | 76.0  | 0.0  | 13.0  | 76.0  |
| Total Split (%)         | 25.8% | 25.8% | 25.8% | 25.8% | 25.8% | 25.8% | 10.8% | 63.3% | 0.0% | 10.8% | 63.3% |
| Maximum Green (s)       | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 8.0   | 70.0  |      | 8.0   | 70.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   |      | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   |      | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       |       |       | Lead  | Lag   |      | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |      |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |      | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |      | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None  | C-Max |      | None  | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |       | 7.0   |      |       | 7.0   |
| Flash Dont Walk (s)     | 18.0  | 18.0  | 18.0  | 18.0  | 18.0  | 18.0  |       | 8.0   |      |       | 8.0   |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     | 0     |       | 0     |      |       | 0     |
| 90th %ile Green (s)     | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 8.0   | 70.0  |      | 8.0   | 70.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Max   | Coord |      | Max   | Coord |
| 70th %ile Green (s)     | 20.2  | 20.2  | 20.2  | 20.2  | 20.2  | 20.2  | 10.7  | 74.5  |      | 8.3   | 72.1  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Coord |      | Gap   | Coord |
| 50th %ile Green (s)     | 17.3  | 17.3  | 17.3  | 17.3  | 17.3  | 17.3  | 8.3   | 78.2  |      | 7.5   | 77.4  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Coord |      | Gap   | Coord |
| 30th %ile Green (s)     | 14.4  | 14.4  | 14.4  | 14.4  | 14.4  | 14.4  | 7.4   | 81.8  |      | 6.8   | 81.2  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Coord |      | Gap   | Coord |
| 10th %ile Green (s)     | 10.1  | 10.1  | 10.1  | 10.1  | 10.1  | 10.1  | 6.5   | 86.9  |      | 6.0   | 86.4  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Coord |      | Min   | Coord |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 72 (60%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
54: Beauregard St & N Morgan St

Existing 2010  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL  | WBT   | WBR  | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|------|------|------|-------|------|-------|------|-------|-------|-------|------|
| Lane Configurations | ↔     | ↔    | ↔    | ↔    | ↔     | ↔    | ↔     | ↔    | ↔     | ↔     | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12   | 12    | 12   | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           | 0%    |      |      |      | 0%    |      |       |      | 0%    |       | 0%    |      |
| Storage Length (ft) | 0     |      | 175  | 0    |       | 0    | 115   |      | 0     | 115   |       | 0    |
| Storage Lanes       | 1     |      | 1    | 0    |       | 0    | 1     |      | 0     | 1     |       | 0    |
| Taper Length (ft)   | 50    |      |      | 50   |       |      | 50    |      |       | 50    |       |      |
| 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     | 0.98  |      |      |      | 0.98  |      |       |      | 1.00  |       | 0.99  |      |
| Frt                 | 0.850 |      |      |      | 0.932 |      |       |      | 0.995 |       | 0.976 |      |
| Flt Protected       | 0.950 |      |      |      | 0.976 |      | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (prot)   | 1770  | 1550 | 0    | 0    | 1669  | 0    | 1770  | 3507 | 0     | 1770  | 3413  | 0    |
| Flt Permitted       | 0.818 |      |      |      | 0.836 |      | 0.080 |      |       | 0.394 |       |      |
| Satd. Flow (perm)   | 1524  | 1550 | 0    | 0    | 1429  | 0    | 149   | 3507 | 0     | 734   | 3413  | 0    |
| Right Turn on Red   |       |      | Yes  |      |       | Yes  |       |      | Yes   |       |       | Yes  |
| Satd. Flow (RTOR)   | 408   |      |      |      | 32    |      |       |      | 3     |       | 19    |      |
| Link Speed (mph)    | 25    |      |      |      | 25    |      |       |      | 35    |       | 35    |      |
| Link Distance (ft)  | 775   |      |      |      | 737   |      |       |      | 1064  |       | 947   |      |
| Travel Time (s)     | 21.1  |      |      |      | 20.1  |      |       |      | 20.7  |       | 18.4  |      |

Intersection Summary

Area Type: Other

Timings  
54: Beauregard St & N Morgan St

Existing 2010  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Volume (vph)         | 75    | 0     | 30    | 0     | 10    | 610   | 75    | 1000  |
| 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)  | 8.0   | 8.0   | 8.0   | 8.0   | 4.0   | 15.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 27.0  | 27.0  | 27.0  | 27.0  | 9.0   | 21.0  | 9.0   | 21.0  |
| Total Split (s)      | 50.0  | 50.0  | 50.0  | 50.0  | 30.0  | 50.0  | 30.0  | 50.0  |
| Total Split (%)      | 38.5% | 38.5% | 38.5% | 38.5% | 23.1% | 38.5% | 23.1% | 38.5% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -5.0  |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 6.0   | 5.0   | 1.0   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | Max   | Max   | None  | None  |
| Act Effct Green (s)  | 11.2  | 11.2  |       | 11.2  | 75.1  | 65.5  | 50.7  | 49.1  |
| Actuated g/C Ratio   | 0.12  | 0.12  |       | 0.12  | 0.77  | 0.67  | 0.52  | 0.50  |
| v/c Ratio            | 0.46  | 0.02  |       | 0.33  | 0.02  | 0.29  | 0.18  | 0.74  |
| Control Delay        | 48.8  | 0.1   |       | 27.7  | 3.2   | 7.6   | 7.4   | 22.4  |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 48.8  | 0.1   |       | 27.7  | 3.2   | 7.6   | 7.4   | 22.4  |
| LOS                  | D     | A     |       | C     | A     | A     | A     | C     |
| Approach Delay       |       | 43.0  |       | 27.7  |       | 7.5   |       | 21.5  |
| Approach LOS         |       | D     |       | C     |       | A     |       | C     |

Intersection Summary

|   |                        |
|---|------------------------|
| Cycle Length: 130                       |                        |
| Actuated Cycle Length: 97.3             |                        |
| Natural Cycle: 60                       |                        |
| Control Type: Actuated-Uncoordinated    |                        |
| Maximum v/c Ratio: 0.74                 |                        |
| Intersection Signal Delay: 18.2         | Intersection LOS: B    |
| Intersection Capacity Utilization 62.4% | ICU Level of Service B |
| Analysis Period (min) 15                |                        |

Splits and Phases: 54: Beauregard St & N Morgan St



Phasings  
54: Beauregard St & N Morgan St

Existing 2010  
PM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 4     |       | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases        | 4     |       | 4     |       | 2     |       | 6     |       |
| Minimum Initial (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 4.0   | 15.0  | 4.0   | 10.0  |
| Minimum Split (s)       | 27.0  | 27.0  | 27.0  | 27.0  | 9.0   | 21.0  | 9.0   | 21.0  |
| Total Split (s)         | 50.0  | 50.0  | 50.0  | 50.0  | 30.0  | 50.0  | 30.0  | 50.0  |
| Total Split (%)         | 38.5% | 38.5% | 38.5% | 38.5% | 23.1% | 38.5% | 23.1% | 38.5% |
| Maximum Green (s)       | 44.0  | 44.0  | 44.0  | 44.0  | 25.0  | 44.0  | 25.0  | 44.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| 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   | 4.0   | 2.0   | 4.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | Max   | Max   | None  | None  |
| Walk Time (s)           | 4.0   | 4.0   | 4.0   | 4.0   |       | 7.0   |       | 7.0   |
| Flash Dont Walk (s)     | 17.0  | 17.0  | 17.0  | 17.0  |       | 8.0   |       | 8.0   |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     |       | 0     |       | 0     |
| 90th %ile Green (s)     | 15.5  | 15.5  | 15.5  | 15.5  | 25.0  | 62.2  | 6.8   | 44.0  |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | MaxR  | Hold  | Gap   | Max   |
| 70th %ile Green (s)     | 12.7  | 12.7  | 12.7  | 12.7  | 25.0  | 63.0  | 6.0   | 44.0  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | MaxR  | Hold  | Gap   | Max   |
| 50th %ile Green (s)     | 10.9  | 10.9  | 10.9  | 10.9  | 25.0  | 63.5  | 5.5   | 44.0  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | MaxR  | Hold  | Gap   | Max   |
| 30th %ile Green (s)     | 9.2   | 9.2   | 9.2   | 9.2   | 25.0  | 63.9  | 5.1   | 44.0  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | MaxR  | Hold  | Gap   | Max   |
| 10th %ile Green (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 25.0  | 74.0  | 0.0   | 44.0  |
| 10th %ile Term Code     | Min   | Min   | Min   | Min   | MaxR  | Hold  | Skip  | Max   |

Intersection Summary

|                                      |
|--------------------------------------|
| Cycle Length: 130                    |
| Actuated Cycle Length: 97.3          |
| Control Type: Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: 101.5      |
| 70th %ile Actuated Cycle: 98.7       |
| 50th %ile Actuated Cycle: 96.9       |
| 30th %ile Actuated Cycle: 95.2       |
| 10th %ile Actuated Cycle: 94         |

Lanes and Geometrics  
55: Beauregard St & N Armistead St

Existing 2010  
PM PEAK

| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT   | WBR   | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|---------------------|------|-------|-------|------|-------|-------|-------|-------|------|-------|-------|------|
| Lane Configurations |      | ↔     | ↔     |      | ↔     | ↔     | ↔     | ↔     |      | ↔     | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           |      | 0%    |       |      | 0%    |       |       | 0%    |      |       | 0%    |      |
| Storage Length (ft) | 0    |       | 50    | 0    |       | 50    | 90    |       | 0    | 80    |       | 0    |
| Storage Lanes       | 0    |       | 1     | 0    |       | 1     |       |       | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50   |       |       | 50   |       |       | 50    |       |      | 50    |       |      |
| Lane Util. Factor   | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 0.95  | 0.95 | 0.91  | 0.91  | 0.95 |
| Ped Bike Factor     |      |       |       |      |       |       |       | 0.98  | 1.00 |       |       |      |
| Frt                 |      |       | 0.850 |      |       | 0.850 |       | 0.992 |      |       | 0.996 |      |
| Flt Protected       |      | 0.950 |       |      | 0.950 |       | 0.950 |       |      | 0.950 | 0.999 |      |
| Satd. Flow (prot)   | 0    | 1770  | 1583  | 0    | 1770  | 1583  | 1770  | 3505  | 0    | 1610  | 3373  | 0    |
| Flt Permitted       |      | 0.722 |       |      | 0.750 |       | 0.288 |       |      | 0.346 | 0.945 |      |
| Satd. Flow (perm)   | 0    | 1345  | 1583  | 0    | 1397  | 1552  | 536   | 3505  | 0    | 587   | 3191  | 0    |
| Right Turn on Red   |      |       | Yes   |      | Yes   |       | Yes   |       | Yes  |       | Yes   |      |
| Satd. Flow (RTOR)   |      |       | 27    |      |       | 129   |       | 9     |      |       | 6     |      |
| Link Speed (mph)    |      | 25    |       |      | 25    |       |       | 35    |      |       | 35    |      |
| Link Distance (ft)  |      | 620   |       |      | 778   |       |       | 935   |      |       | 1064  |      |
| Travel Time (s)     |      | 16.9  |       |      | 21.2  |       |       | 18.2  |      |       | 20.7  |      |

Intersection Summary

Area Type: Other

Timings  
55: Beauregard St & N Armistead St

Existing 2010  
PM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       | ↔     | ↔     |       | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 10    | 0     | 25    | 50    | 0     | 120   | 10    | 510   | 170   | 845   |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | Perm  | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     |       | 4     |       |       | 4     |       | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 4     | 4     |       | 4     | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 5.0   | 12.0  | 5.0   | 12.0  |
| Minimum Split (s)    | 13.5  | 13.5  | 13.5  | 13.5  | 13.5  | 13.5  | 10.0  | 22.0  | 10.0  | 22.0  |
| Total Split (s)      | 23.5  | 23.5  | 23.5  | 23.5  | 23.5  | 23.5  | 15.0  | 51.0  | 15.0  | 51.0  |
| Total Split (%)      | 26.3% | 26.3% | 26.3% | 26.3% | 26.3% | 26.3% | 16.8% | 57.0% | 16.8% | 57.0% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 8.9   | 8.9   |       | 8.9   | 8.9   | 21.8  | 19.3  | 27.0  | 28.4  |       |
| Actuated g/C Ratio   | 0.21  | 0.21  |       | 0.21  | 0.21  | 0.50  | 0.44  | 0.62  | 0.65  |       |
| v/c Ratio            | 0.04  | 0.08  |       | 0.19  | 0.31  | 0.02  | 0.37  | 0.29  | 0.45  |       |
| Control Delay        | 18.9  | 9.5   |       | 20.6  | 7.1   | 5.0   | 13.8  | 6.0   | 6.5   |       |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Total Delay          | 18.9  | 9.5   |       | 20.6  | 7.1   | 5.0   | 13.8  | 6.0   | 6.5   |       |
| LOS                  | B     | A     |       | C     | A     | A     | B     | A     | A     |       |
| Approach Delay       | 12.2  |       |       | 11.1  |       |       | 13.6  |       | 6.5   |       |
| Approach LOS         | B     |       |       | B     |       |       | B     |       | A     |       |

Intersection Summary

Cycle Length: 89.5  
 Actuated Cycle Length: 43.4  
 Natural Cycle: 50  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.45  
 Intersection Signal Delay: 9.2  
 Intersection LOS: A  
 Intersection Capacity Utilization 67.4%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 55: Beauregard St & N Armistead St



Phasings  
55: Beauregard St & N Armistead St

Existing 2010  
PM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| Protected Phases        |       |       | 4     |       |       | 4     |       | 5     | 2     | 1     | 6 |
| Permitted Phases        | 4     |       |       | 4     |       | 4     |       | 2     |       | 6     |   |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 5.0   | 12.0  | 5.0   | 12.0  |   |
| Minimum Split (s)       | 13.5  | 13.5  | 13.5  | 13.5  | 13.5  | 13.5  | 10.0  | 22.0  | 10.0  | 22.0  |   |
| Total Split (s)         | 23.5  | 23.5  | 23.5  | 23.5  | 23.5  | 23.5  | 15.0  | 51.0  | 15.0  | 51.0  |   |
| Total Split (%)         | 26.3% | 26.3% | 26.3% | 26.3% | 26.3% | 26.3% | 16.8% | 57.0% | 16.8% | 57.0% |   |
| Maximum Green (s)       | 17.0  | 17.0  | 17.0  | 17.0  | 17.0  | 17.0  | 10.0  | 45.0  | 10.0  | 45.0  |   |
| Yellow Time (s)         | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.0   | 4.0   | 3.0   | 4.0   |   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |   |
| Lead/Lag                |       |       |       |       |       |       | Lead  | Lag   | Lead  | Lag   |   |
| Lead-Lag Optimize?      |       |       |       |       |       |       | Yes   | Yes   | Yes   | Yes   |   |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   |   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None  | None  | None  | None  |   |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |       | 4.0   |       | 4.0   |   |
| Flash Dont Walk (s)     | 23.0  | 23.0  | 23.0  | 23.0  | 23.0  | 23.0  |       | 12.0  |       | 12.0  |   |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     | 0     |       | 0     |       | 0     |   |
| 90th %ile Green (s)     | 11.0  | 11.0  | 11.0  | 11.0  | 11.0  | 11.0  | 6.0   | 19.6  | 10.0  | 23.6  |   |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Max   | Hold  |   |
| 70th %ile Green (s)     | 8.3   | 8.3   | 8.3   | 8.3   | 8.3   | 8.3   | 0.0   | 15.5  | 8.6   | 29.1  |   |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Skip  | Gap   | Gap   | Hold  |   |
| 50th %ile Green (s)     | 7.2   | 7.2   | 7.2   | 7.2   | 7.2   | 7.2   | 0.0   | 13.7  | 7.7   | 26.4  |   |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Skip  | Gap   | Gap   | Hold  |   |
| 30th %ile Green (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 0.0   | 12.0  | 7.0   | 24.0  |   |
| 30th %ile Term Code     | Min   | Min   | Min   | Min   | Min   | Min   | Skip  | Min   | Gap   | Hold  |   |
| 10th %ile Green (s)     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 13.6  | 0.0   | 13.6  |   |
| 10th %ile Term Code     | Skip  | Skip  | Skip  | Skip  | Skip  | Skip  | Skip  | Hold  | Skip  | Gap   |   |

Intersection Summary

Cycle Length: 89.5  
 Actuated Cycle Length: 43.4  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 58.1  
 70th %ile Actuated Cycle: 49.9  
 50th %ile Actuated Cycle: 46.1  
 30th %ile Actuated Cycle: 43.5  
 10th %ile Actuated Cycle: 19.6

Lanes and Geometrics  
56: Beauregard St & Quantrell Ave

Existing 2010  
PM PEAK

| Lane Group          | WBL   | WBR   | NBT  | NBR   | SBL   | SBT  |
|---------------------|-------|-------|------|-------|-------|------|
| Lane Configurations |       |       |      |       |       |      |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           | 0%    |       | 0%   |       |       | 0%   |
| Storage Length (ft) | 0     | 50    |      | 85    | 100   |      |
| Storage Lanes       | 1     | 1     |      | 1     | 1     |      |
| Taper Length (ft)   | 50    |       |      |       | 50    |      |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95 | 1.00  | 1.00  | 0.95 |
| Ped Bike Factor     | 0.97  |       |      |       |       |      |
| Frt                 |       | 0.850 |      | 0.850 |       |      |
| Flt Protected       | 0.950 |       |      |       | 0.950 |      |
| Satd. Flow (prot)   | 1770  | 1583  | 3539 | 1583  | 1770  | 3539 |
| Flt Permitted       | 0.950 |       |      |       | 0.445 |      |
| Satd. Flow (perm)   | 1720  | 1583  | 3539 | 1583  | 829   | 3539 |
| Right Turn on Red   |       | Yes   |      | Yes   |       |      |
| Satd. Flow (RTOR)   |       | 38    |      | 86    |       |      |
| Link Speed (mph)    | 30    |       | 35   |       |       | 35   |
| Link Distance (ft)  | 751   |       | 931  |       |       | 935  |
| Travel Time (s)     | 17.1  |       | 18.1 |       |       | 18.2 |

Intersection Summary

Area Type: Other

Timings  
56: Beauregard St & Quantrell Ave

Existing 2010  
PM PEAK

| Lane Group           | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↑↑    | ↔     | ↔     | ↑↑    |
| Volume (vph)         | 100   | 35    | 515   | 80    | 75    | 845   |
| Turn Type            | NA    | Perm  | NA    | Perm  | Perm  | NA    |
| Protected Phases     | 4     |       | 2     |       |       | 2     |
| Permitted Phases     |       | 4     |       | 2     | 2     |       |
| Detector Phase       | 4     | 4     | 2     | 2     | 2     | 2     |
| Switch Phase         |       |       |       |       |       |       |
| Minimum Initial (s)  | 6.0   | 6.0   | 10.0  | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)    | 12.0  | 12.0  | 16.0  | 16.0  | 16.0  | 16.0  |
| Total Split (s)      | 31.0  | 31.0  | 66.0  | 66.0  | 66.0  | 66.0  |
| Total Split (%)      | 32.0% | 32.0% | 68.0% | 68.0% | 68.0% | 68.0% |
| Yellow Time (s)      | 3.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |
| Recall Mode          | None  | None  | Max   | Max   | Max   | Max   |
| Act Effct Green (s)  | 10.3  | 10.3  | 64.4  | 64.4  | 64.4  | 64.4  |
| Actuated g/C Ratio   | 0.12  | 0.12  | 0.78  | 0.78  | 0.78  | 0.78  |
| v/c Ratio            | 0.49  | 0.16  | 0.20  | 0.07  | 0.13  | 0.33  |
| Control Delay        | 41.2  | 12.6  | 3.7   | 1.1   | 4.4   | 4.3   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 41.2  | 12.6  | 3.7   | 1.1   | 4.4   | 4.3   |
| LOS                  | D     | B     | A     | A     | A     | A     |
| Approach Delay       | 33.7  |       | 3.4   |       |       | 4.3   |
| Approach LOS         | C     |       | A     |       |       | A     |

Intersection Summary

Cycle Length: 97  
 Actuated Cycle Length: 82.9  
 Natural Cycle: 40  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.49  
 Intersection Signal Delay: 6.4      Intersection LOS: A  
 Intersection Capacity Utilization 43.1%      ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 56: Beauregard St & Quantrell Ave



Phasings  
56: Beauregard St & Quantrell Ave

Existing 2010  
PM PEAK

| Lane Group              | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 4     |       | 2     |       |       | 2     |
| Permitted Phases        |       | 4     |       | 2     | 2     |       |
| Minimum Initial (s)     | 6.0   | 6.0   | 10.0  | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 12.0  | 12.0  | 16.0  | 16.0  | 16.0  | 16.0  |
| Total Split (s)         | 31.0  | 31.0  | 66.0  | 66.0  | 66.0  | 66.0  |
| Total Split (%)         | 32.0% | 32.0% | 68.0% | 68.0% | 68.0% | 68.0% |
| Maximum Green (s)       | 25.0  | 25.0  | 60.0  | 60.0  | 60.0  | 60.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | Max   | Max   | Max   | Max   |
| Walk Time (s)           |       |       |       |       |       |       |
| Flash Dont Walk (s)     |       |       |       |       |       |       |
| Pedestrian Calls (#/hr) |       |       |       |       |       |       |
| 90th %ile Green (s)     | 14.4  | 14.4  | 60.0  | 60.0  | 60.0  | 60.0  |
| 90th %ile Term Code     | Gap   | Gap   | MaxR  | MaxR  | MaxR  | MaxR  |
| 70th %ile Green (s)     | 11.9  | 11.9  | 60.0  | 60.0  | 60.0  | 60.0  |
| 70th %ile Term Code     | Gap   | Gap   | MaxR  | MaxR  | MaxR  | MaxR  |
| 50th %ile Green (s)     | 10.3  | 10.3  | 60.0  | 60.0  | 60.0  | 60.0  |
| 50th %ile Term Code     | Gap   | Gap   | MaxR  | MaxR  | MaxR  | MaxR  |
| 30th %ile Green (s)     | 8.7   | 8.7   | 60.0  | 60.0  | 60.0  | 60.0  |
| 30th %ile Term Code     | Gap   | Gap   | MaxR  | MaxR  | MaxR  | MaxR  |
| 10th %ile Green (s)     | 0.0   | 0.0   | 75.0  | 75.0  | 75.0  | 75.0  |
| 10th %ile Term Code     | Skip  | Skip  | Dwell | Dwell | Dwell | Dwell |

Intersection Summary

Cycle Length: 97  
 Actuated Cycle Length: 82.9  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 86.4  
 70th %ile Actuated Cycle: 83.9  
 50th %ile Actuated Cycle: 82.3  
 30th %ile Actuated Cycle: 80.7  
 10th %ile Actuated Cycle: 81

Lanes and Geometrics  
58: Lincoln Rd/Gloucester Rd & Beauregard St

Existing 2010  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT  | WBR  | NBL  | NBT  | NBR   | SBL  | SBT   | SBR  |
|---------------------|-------|------|------|-------|------|------|------|------|-------|------|-------|------|
| Lane Configurations | ↔     | ↕    | ↔    | ↔     | ↕    | ↔    | ↔    | ↕    | ↔     | ↔    | ↕     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12   | 12   | 12   | 12   | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |      | 0%   |       | 0%   |      | 0%   |      | 0%    |      | 0%    |      |
| Storage Length (ft) | 175   |      | 0    | 175   |      | 0    | 0    |      | 0     | 0    |       | 0    |
| Storage Lanes       | 1     |      | 0    | 1     |      | 0    | 0    |      | 1     | 0    |       | 0    |
| Taper Length (ft)   | 50    |      |      | 50    |      |      | 50   |      | 50    |      |       | 50   |
| 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 |
| Ped Bike Factor     | 0.98  |      |      |       |      |      |      |      | 0.99  |      | 0.99  |      |
| Frt                 | 0.973 |      |      |       |      |      |      |      | 0.850 |      | 0.865 |      |
| Flt Protected       | 0.950 |      |      | 0.950 |      |      |      |      | 0.950 |      |       |      |
| Satd. Flow (prot)   | 1770  | 3386 | 0    | 1770  | 3539 | 0    | 0    | 1770 | 1583  | 0    | 1590  | 0    |
| Flt Permitted       | 0.260 |      |      | 0.295 |      |      |      |      | 0.754 |      |       |      |
| Satd. Flow (perm)   | 484   | 3386 | 0    | 550   | 3539 | 0    | 0    | 1405 | 1560  | 0    | 1590  | 0    |
| Right Turn on Red   |       |      | Yes  |       |      | Yes  |      |      | Yes   |      |       | Yes  |
| Satd. Flow (RTOR)   | 21    |      |      |       |      |      |      |      | 91    |      | 280   |      |
| Link Speed (mph)    | 35    |      |      |       | 35   |      |      |      | 35    |      | 30    |      |
| Link Distance (ft)  | 545   |      |      |       | 931  |      |      |      | 614   |      | 831   |      |
| Travel Time (s)     | 10.6  |      |      |       | 18.1 |      |      |      | 12.0  |      | 18.9  |      |

Intersection Summary

Area Type: Other

Timings  
58: Lincoln Rd/Gloucester Rd & Beauregard St

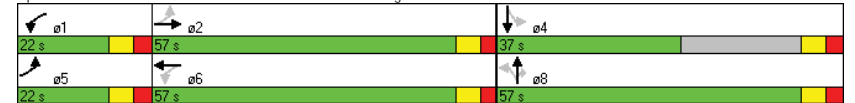
Existing 2010  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↕     | ↕     |
| Volume (vph)         | 15    | 510   | 90    | 855   | 215   | 0     | 85    | 0     |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     |       | 8     |       | 4     |
| Permitted Phases     | 2     |       | 6     |       | 8     |       | 8     |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 8     | 8     | 8     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 13.0  | 17.0  | 13.0  | 17.0  | 15.0  | 15.0  | 15.0  | 15.0  |
| Total Split (s)      | 22.0  | 57.0  | 22.0  | 57.0  | 57.0  | 57.0  | 57.0  | 37.0  |
| Total Split (%)      | 16.2% | 41.9% | 16.2% | 41.9% | 41.9% | 41.9% | 41.9% | 27.2% |
| Yellow Time (s)      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   |       |       |       |       |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   |       |       |       |       |
| Recall Mode          | None  | Min   | None  | Min   | None  | None  | None  | None  |
| Act Effct Green (s)  | 28.6  | 24.0  | 34.0  | 31.1  |       | 18.7  | 18.7  | 18.7  |
| Actuated g/C Ratio   | 0.41  | 0.35  | 0.49  | 0.45  |       | 0.27  | 0.27  | 0.27  |
| v/c Ratio            | 0.05  | 0.56  | 0.24  | 0.58  |       | 0.61  | 0.19  | 0.01  |
| Control Delay        | 10.1  | 21.5  | 10.8  | 18.0  |       | 32.1  | 6.7   | 0.0   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Total Delay          | 10.1  | 21.5  | 10.8  | 18.0  |       | 32.1  | 6.7   | 0.0   |
| LOS                  | B     | C     | B     | B     |       | C     | A     | A     |
| Approach Delay       | 21.3  |       | 17.3  |       | 24.9  |       | 0.0   |       |
| Approach LOS         | C     |       | B     |       | C     |       | A     |       |

Intersection Summary

Cycle Length: 136  
 Actuated Cycle Length: 69.3  
 Natural Cycle: 60  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.61  
 Intersection Signal Delay: 19.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 63.5%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 58: Lincoln Rd/Gloucester Rd & Beauregard St





Phasings  
58: Lincoln Rd/Gloucester Rd & Beauregard St

Existing 2010  
PM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 5     | 2     | 1     | 6     |       | 8     |       | 4     |
| Permitted Phases        | 2     |       | 6     |       | 8     |       | 8     |       |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 13.0  | 17.0  | 13.0  | 17.0  | 15.0  | 15.0  | 15.0  | 15.0  |
| Total Split (s)         | 22.0  | 57.0  | 22.0  | 57.0  | 57.0  | 57.0  | 57.0  | 37.0  |
| Total Split (%)         | 16.2% | 41.9% | 16.2% | 41.9% | 41.9% | 41.9% | 41.9% | 27.2% |
| Maximum Green (s)       | 15.0  | 50.0  | 15.0  | 50.0  | 50.0  | 50.0  | 50.0  | 30.0  |
| Yellow Time (s)         | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   |       |       |       |       |
| Lead-Lag Optimize?      | Yes   | Yes   | Yes   | Yes   |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | Min   | None  | Min   | None  | None  | None  | None  |
| Walk Time (s)           |       | 7.0   |       |       | 7.0   | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       | 19.0  |       |       | 23.0  | 23.0  | 23.0  | 22.0  |
| Pedestrian Calls (#/hr) |       | 0     |       |       | 0     | 0     | 0     | 0     |
| 90th %ile Green (s)     | 7.0   | 36.5  | 10.2  | 39.7  | 30.3  | 30.3  | 30.3  | 30.3  |
| 90th %ile Term Code     | Gap   | Hold  | Gap   | Gap   | Gap   | Gap   | Gap   | Hold  |
| 70th %ile Green (s)     | 6.4   | 29.7  | 8.5   | 31.8  | 23.3  | 23.3  | 23.3  | 23.3  |
| 70th %ile Term Code     | Gap   | Hold  | Gap   | Gap   | Gap   | Gap   | Gap   | Hold  |
| 50th %ile Green (s)     | 0.0   | 19.6  | 7.6   | 34.2  | 17.3  | 17.3  | 17.3  | 17.3  |
| 50th %ile Term Code     | Skip  | Gap   | Gap   | Hold  | Gap   | Gap   | Gap   | Hold  |
| 30th %ile Green (s)     | 0.0   | 16.9  | 6.8   | 30.7  | 14.3  | 14.3  | 14.3  | 14.3  |
| 30th %ile Term Code     | Skip  | Gap   | Gap   | Hold  | Gap   | Gap   | Gap   | Hold  |
| 10th %ile Green (s)     | 0.0   | 17.1  | 0.0   | 17.1  | 10.6  | 10.6  | 10.6  | 10.6  |
| 10th %ile Term Code     | Skip  | Dwell | Skip  | Dwell | Gap   | Gap   | Gap   | Hold  |

Intersection Summary

|                                      |
|--------------------------------------|
| Cycle Length: 136                    |
| Actuated Cycle Length: 69.3          |
| Control Type: Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: 98         |
| 70th %ile Actuated Cycle: 82.5       |
| 50th %ile Actuated Cycle: 65.5       |
| 30th %ile Actuated Cycle: 59         |
| 10th %ile Actuated Cycle: 41.7       |

Lanes and Geometrics  
59: Beauregard St & N Chambliss St/Plaza at Landmark

Existing 2010  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT  | NBR   | SBL   | SBT   | SBR   |
|---------------------|-------|------|-------|-------|-------|------|-------|------|-------|-------|-------|-------|
| Lane Configurations |       |      |       |       |       |      |       |      |       |       |       |       |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12    | 12    |
| Grade (%)           |       | 0%   |       |       | 0%    |      |       | 0%   |       |       | 0%    |       |
| Storage Length (ft) | 0     |      | 75    | 0     |       | 0    | 100   |      | 140   | 170   |       | 0     |
| Storage Lanes       | 1     |      | 1     | 1     |       | 0    | 1     |      | 1     | 1     |       | 0     |
| Taper Length (ft)   | 50    |      |       | 50    |       |      | 50    |      |       | 50    |       |       |
| Lane Util. Factor   | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 0.95  |
| Ped Bike Factor     |       |      | 0.99  |       | 0.99  |      |       |      | 0.98  |       |       |       |
| Frt                 |       |      | 0.850 |       | 0.917 |      |       |      | 0.850 |       |       | 0.997 |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      | 0.950 |      |       |       | 0.950 |       |
| Satd. Flow (prot)   | 1770  | 1863 | 1583  | 1770  | 1688  | 0    | 1770  | 3539 | 1583  | 1770  | 3529  | 0     |
| Flt Permitted       | 0.950 |      |       | 0.950 |       |      | 0.139 |      |       | 0.486 |       |       |
| Satd. Flow (perm)   | 1770  | 1863 | 1561  | 1770  | 1688  | 0    | 259   | 3539 | 1546  | 905   | 3529  | 0     |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |       |      | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)   |       |      | 484   |       | 52    |      |       |      | 172   |       |       | 2     |
| Link Speed (mph)    |       | 30   |       |       | 25    |      |       | 25   |       |       |       | 35    |
| Link Distance (ft)  |       | 622  |       |       | 252   |      |       | 846  |       |       |       | 464   |
| Travel Time (s)     |       | 14.1 |       |       | 6.9   |      |       | 23.1 |       |       |       | 9.0   |

Intersection Summary

|            |       |
|------------|-------|
| Area Type: | Other |
|------------|-------|

Timings

59: Beauregard St & N Chambliss St/Plaza at Landmark

Existing 2010  
PM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↘     | ↖     | ↗     | ↖     | ↗     | ↘     | ↖     | ↗     |
| Volume (vph)         | 130   | 85    | 450   | 245   | 60    | 400   | 430   | 160   | 80    | 630   |
| Turn Type            | Split | NA    | Free  | Split | NA    | pm+pt | NA    | Perm  | pm+pt | NA    |
| Protected Phases     | 3     | 3     |       | 4     | 4     | 5     | 2     |       | 1     | 6     |
| Permitted Phases     |       |       | Free  |       |       | 2     |       | 2     | 6     |       |
| Detector Phase       | 3     | 3     |       | 4     | 4     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   |       | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 1.0   | 4.0   |
| Minimum Split (s)    | 12.0  | 12.0  |       | 12.0  | 12.0  | 12.0  | 22.0  | 22.0  | 12.0  | 22.0  |
| Total Split (s)      | 25.0  | 25.0  | 0.0   | 21.0  | 21.0  | 25.0  | 37.0  | 37.0  | 17.0  | 29.0  |
| Total Split (%)      | 25.0% | 25.0% | 0.0%  | 21.0% | 21.0% | 25.0% | 37.0% | 37.0% | 17.0% | 29.0% |
| Yellow Time (s)      | 4.0   | 4.0   |       | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   |       | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -5.0  |
| Total Lost Time (s)  | 7.0   | 7.0   | 4.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 2.0   |
| Lead/Lag             | Lead  | Lead  |       | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   | Yes   |       | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | None  |       | None  | None  | C-Min | C-Min | None  | C-Min |       |
| Act Effct Green (s)  | 12.2  | 12.2  | 100.5 | 19.5  | 19.5  | 47.3  | 35.5  | 35.5  | 28.9  | 26.7  |
| Actuated g/C Ratio   | 0.12  | 0.12  | 1.00  | 0.20  | 0.20  | 0.47  | 0.36  | 0.36  | 0.29  | 0.27  |
| v/c Ratio            | 0.65  | 0.40  | 0.31  | 0.76  | 0.39  | 1.07  | 0.37  | 0.26  | 0.27  | 0.73  |
| Control Delay        | 55.0  | 44.5  | 0.5   | 55.4  | 27.2  | 84.8  | 24.3  | 5.6   | 18.6  | 38.6  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 55.0  | 44.5  | 0.5   | 55.4  | 27.2  | 84.8  | 24.3  | 5.6   | 18.6  | 38.6  |
| LOS                  | E     | D     | A     | E     | C     | F     | C     | A     | B     | D     |
| Approach Delay       |       | 16.8  |       |       | 45.3  |       | 45.7  |       |       | 36.4  |
| Approach LOS         |       | B     |       |       | D     |       | D     |       |       | D     |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 24 (24%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.07  
 Intersection Signal Delay: 36.2  
 Intersection LOS: D  
 Intersection Capacity Utilization 80.5%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 59: Beauregard St & N Chambliss St/Plaza at Landmark



Phasings

59: Beauregard St & N Chambliss St/Plaza at Landmark

Existing 2010  
PM PEAK

| Lane Group              | EBL   | EBT   | EBR  | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 3     | 3     |      | 4     | 4     | 5     | 2     |       | 1     | 6     |
| Permitted Phases        |       |       | Free |       |       | 2     |       | 2     | 6     |       |
| Minimum Initial (s)     | 4.0   | 4.0   |      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 1.0   | 4.0   |
| Minimum Split (s)       | 12.0  | 12.0  |      | 12.0  | 12.0  | 12.0  | 22.0  | 22.0  | 12.0  | 22.0  |
| Total Split (s)         | 25.0  | 25.0  | 0.0  | 21.0  | 21.0  | 25.0  | 37.0  | 37.0  | 17.0  | 29.0  |
| Total Split (%)         | 25.0% | 25.0% | 0.0% | 21.0% | 21.0% | 25.0% | 37.0% | 37.0% | 17.0% | 29.0% |
| Maximum Green (s)       | 18.0  | 18.0  |      | 14.0  | 14.0  | 18.0  | 30.0  | 30.0  | 10.0  | 22.0  |
| Yellow Time (s)         | 4.0   | 4.0   |      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   |      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lead  |      | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      | Yes   | Yes   |      | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Vehicle Extension (s)   | 2.0   | 2.0   |      | 3.0   | 3.0   | 2.0   | 4.0   | 4.0   | 2.0   | 4.0   |
| Minimum Gap (s)         | 2.0   | 2.0   |      | 3.0   | 3.0   | 2.0   | 4.0   | 4.0   | 2.0   | 4.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  |      | None  | None  | None  | C-Min | C-Min | None  | C-Min |
| Walk Time (s)           |       |       |      | 7.0   | 7.0   |       |       |       |       |       |
| Flash Dont Walk (s)     |       |       |      | 22.0  | 22.0  |       |       |       |       |       |
| Pedestrian Calls (#/hr) |       |       |      | 0     | 0     |       |       |       |       |       |
| 90th %ile Green (s)     | 17.3  | 17.3  |      | 14.7  | 14.7  | 18.0  | 30.4  | 30.4  | 9.6   | 22.0  |
| 90th %ile Term Code     | Gap   | Gap   |      | Max   | Max   | Max   | Coord | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 14.3  | 14.3  |      | 17.7  | 17.7  | 18.0  | 31.9  | 31.9  | 8.1   | 22.0  |
| 70th %ile Term Code     | Gap   | Gap   |      | Max   | Max   | Max   | Coord | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 12.2  | 12.2  |      | 19.8  | 19.8  | 18.0  | 32.8  | 32.8  | 7.2   | 22.0  |
| 50th %ile Term Code     | Gap   | Gap   |      | Max   | Max   | Max   | Coord | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 10.2  | 10.2  |      | 21.8  | 21.8  | 18.0  | 33.8  | 33.8  | 6.2   | 22.0  |
| 30th %ile Term Code     | Gap   | Gap   |      | Max   | Max   | Max   | Coord | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 7.2   | 7.2   |      | 23.4  | 23.4  | 20.7  | 48.4  | 48.4  | 0.0   | 20.7  |
| 10th %ile Term Code     | Gap   | Gap   |      | Gap   | Gap   | Max   | Coord | Coord | Skip  | Coord |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 24 (24%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

61: N Beauregard St/Beauregard St & Route 236

Existing 2010

PM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|------|------|-------|-------|------|-------|------|-------|-------|-------|------|
| Lane Configurations | ↔↔    | ↔↔   | ↔    | ↔↔    | ↔↔    | ↔↔   | ↔↔    | ↔    | ↔↔    | ↔↔    | ↔↔    | ↔↔   |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           | 0%    |      | 0%   |       | 0%    |      | 0%    |      | 0%    |       | 0%    |      |
| Storage Length (ft) | 425   |      | 0    | 215   |       | 0    | 120   |      | 0     | 0     |       | 0    |
| Storage Lanes       | 2     |      | 0    | 1     |       | 1    |       |      | 1     | 1     |       | 1    |
| Taper Length (ft)   | 50    |      |      | 50    |       |      | 50    |      |       | 50    |       |      |
| Lane Util. Factor   | 0.97  | 0.95 | 0.95 | 1.00  | 0.95  | 1.00 | 1.00  | 1.00 | 1.00  | 0.95  | 0.95  | 1.00 |
| Ped Bike Factor     | 1.00  |      |      |       | 0.98  |      |       |      | 0.97  |       |       |      |
| Frt                 | 0.994 |      |      |       | 0.850 |      |       |      | 0.850 |       |       |      |
| Flt Protected       | 0.950 |      |      | 0.950 |       |      | 0.950 |      |       | 0.950 | 0.965 |      |
| Satd. Flow (prot)   | 3433  | 3514 | 0    | 1770  | 3539  | 1583 | 1770  | 1863 | 1583  | 1681  | 1708  | 1583 |
| Flt Permitted       | 0.950 |      |      | 0.950 |       |      | 0.950 |      |       | 0.950 | 0.965 |      |
| Satd. Flow (perm)   | 3433  | 3514 | 0    | 1770  | 3539  | 1545 | 1770  | 1863 | 1534  | 1681  | 1708  | 1529 |
| Right Turn on Red   |       |      | Yes  |       |       | Yes  |       |      | Yes   |       |       | Yes  |
| Satd. Flow (RTOR)   | 3     |      |      |       | 36    |      |       |      | 48    |       |       |      |
| Link Speed (mph)    | 40    |      |      |       | 40    |      |       |      | 25    |       |       |      |
| Link Distance (ft)  | 1126  |      |      |       | 1020  |      |       |      | 665   |       |       |      |
| Travel Time (s)     | 19.2  |      |      |       | 17.4  |      |       |      | 18.1  |       |       |      |

Intersection Summary

Area Type: Other

Timings

61: N Beauregard St/Beauregard St & Route 236

Existing 2010

PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔↔    | ↔↔    | ↔     | ↔↔    | ↔↔    | ↔↔    | ↔     | ↔↔    | ↔↔    | ↔↔    | ↔↔    |
| Volume (vph)         | 265   | 915   | 95    | 1220  | 565   | 135   | 160   | 115   | 840   | 130   | 355   |
| Turn Type            | Prot  | NA    | Prot  | NA    | pm+ov | Split | NA    | pm+ov | Split | NA    | Perm  |
| Protected Phases     | 5     | 2     | 1     | 6     | 3     | 4     | 4     | 1     | 3     | 3     |       |
| Permitted Phases     |       |       |       |       | 6     |       |       | 4     |       |       | 3     |
| Detector Phase       | 5     | 2     | 1     | 6     | 6     | 4     | 4     | 4     | 3     | 3     | 3     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 8.0   | 20.0  | 8.0   | 20.0  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)    | 15.0  | 26.5  | 15.0  | 34.5  | 36.0  | 38.0  | 38.0  | 15.0  | 36.0  | 36.0  | 36.0  |
| Total Split (s)      | 31.0  | 102.5 | 22.0  | 93.5  | 54.5  | 21.0  | 21.0  | 22.0  | 54.5  | 54.5  | 54.5  |
| Total Split (%)      | 15.5% | 51.3% | 11.0% | 46.8% | 27.3% | 10.5% | 10.5% | 11.0% | 27.3% | 27.3% | 27.3% |
| Yellow Time (s)      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 2.5   | 3.0   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -5.0  | -5.0  | 0.0   |
| Total Lost Time (s)  | 7.0   | 6.5   | 7.0   | 6.5   | 7.0   | 7.0   | 7.0   | 7.0   | 2.0   | 2.0   | 7.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 21.2  | 97.1  | 13.9  | 89.8  | 136.8 | 14.0  | 14.0  | 27.9  | 52.5  | 52.5  | 47.5  |
| Actuated g/C Ratio   | 0.11  | 0.49  | 0.07  | 0.45  | 0.68  | 0.07  | 0.07  | 0.14  | 0.26  | 0.26  | 0.24  |
| v/c Ratio            | 0.78  | 0.60  | 0.83  | 0.83  | 0.56  | 1.17  | 1.32  | 0.48  | 1.17  | 1.18  | 0.77  |
| Control Delay        | 102.3 | 39.2  | 134.8 | 54.2  | 14.9  | 206.7 | 252.2 | 50.9  | 152.0 | 155.4 | 52.5  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 102.3 | 39.2  | 134.8 | 54.2  | 14.9  | 206.7 | 252.2 | 50.9  | 152.0 | 155.4 | 52.5  |
| LOS                  | F     | D     | F     | D     | B     | F     | F     | D     | F     | F     | D     |
| Approach Delay       | 53.0  |       | 46.4  |       | 180.6 |       | 126.6 |       |       |       |       |
| Approach LOS         | D     |       | D     |       | F     |       | F     |       |       |       |       |

Intersection Summary

Cycle Length: 200  
 Actuated Cycle Length: 200  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 145  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.32  
 Intersection Signal Delay: 81.5  
 Intersection LOS: F  
 Intersection Capacity Utilization 101.7%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 61: N Beauregard St/Beauregard St & Route 236



Phasings

61: N Beauregard St/Beauregard St & Route 236

Existing 2010

PM PEAK



| Lane Group              | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 5     | 2     | 1     | 6     | 3     | 4     | 4     | 1     | 3     | 3     |       |
| Permitted Phases        |       |       |       |       | 6     |       |       | 4     |       |       | 3     |
| Minimum Initial (s)     | 8.0   | 20.0  | 8.0   | 20.0  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)       | 15.0  | 26.5  | 15.0  | 34.5  | 36.0  | 38.0  | 38.0  | 15.0  | 36.0  | 36.0  | 36.0  |
| Total Split (s)         | 31.0  | 102.5 | 22.0  | 93.5  | 54.5  | 21.0  | 21.0  | 22.0  | 54.5  | 54.5  | 54.5  |
| Total Split (%)         | 15.5% | 51.3% | 11.0% | 46.8% | 27.3% | 10.5% | 10.5% | 11.0% | 27.3% | 27.3% | 27.3% |
| Maximum Green (s)       | 24.0  | 96.0  | 15.0  | 87.0  | 47.5  | 14.0  | 14.0  | 15.0  | 47.5  | 47.5  | 47.5  |
| Yellow Time (s)         | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 2.5   | 3.0   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?      | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Vehicle Extension (s)   | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  | None  | None  |
| Walk Time (s)           |       |       |       |       | 7.0   | 7.0   | 7.0   |       | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |       |       |       | 21.0  | 22.0  | 24.0  |       | 22.0  | 22.0  | 22.0  |
| Pedestrian Calls (#/hr) |       |       |       |       | 0     | 0     | 0     |       | 0     | 0     | 0     |
| 90th %ile Green (s)     | 24.0  | 96.0  | 15.0  | 87.0  | 47.5  | 14.0  | 14.0  | 15.0  | 47.5  | 47.5  | 47.5  |
| 90th %ile Term Code     | Max   | Coord | Max   | Coord | Max   | Max   | Max   | Max   | Max   | Max   | Max   |
| 70th %ile Green (s)     | 24.0  | 96.0  | 15.0  | 87.0  | 47.5  | 14.0  | 14.0  | 15.0  | 47.5  | 47.5  | 47.5  |
| 70th %ile Term Code     | Max   | Coord | Max   | Coord | Max   | Max   | Max   | Max   | Max   | Max   | Max   |
| 50th %ile Green (s)     | 21.8  | 96.0  | 15.0  | 89.2  | 47.5  | 14.0  | 14.0  | 15.0  | 47.5  | 47.5  | 47.5  |
| 50th %ile Term Code     | Gap   | Coord | Max   | Coord | Max   | Max   | Max   | Max   | Max   | Max   | Max   |
| 30th %ile Green (s)     | 19.7  | 96.9  | 14.1  | 91.3  | 47.5  | 14.0  | 14.0  | 14.1  | 47.5  | 47.5  | 47.5  |
| 30th %ile Term Code     | Gap   | Coord | Gap   | Coord | Max   | Max   | Max   | Gap   | Max   | Max   | Max   |
| 10th %ile Green (s)     | 16.6  | 100.6 | 10.4  | 94.4  | 47.5  | 14.0  | 14.0  | 10.4  | 47.5  | 47.5  | 47.5  |
| 10th %ile Term Code     | Gap   | Coord | Gap   | Coord | Max   | Max   | Max   | Gap   | Max   | Max   | Max   |

Intersection Summary

Cycle Length: 200  
 Actuated Cycle Length: 200  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

67: Beauregard St & Lincolnia Rd Spur

Existing 2010

PM PEAK



| Lane Group          | EBL  | EBT  | WBT   | WBR  | SBL  | SBR  |
|---------------------|------|------|-------|------|------|------|
| Lane Configurations |      | ↑↑   | ↑↑    |      |      |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           |      | 0%   | 0%    |      | 0%   |      |
| Storage Length (ft) |      | 0    |       | 0    | 0    | 0    |
| Storage Lanes       |      | 0    |       | 0    | 0    | 0    |
| Taper Length (ft)   |      | 50   |       |      | 50   |      |
| Lane Util. Factor   | 1.00 | 0.95 | 0.95  | 0.95 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      |       |      |      |      |
| Frt                 |      |      | 0.951 |      |      |      |
| Flt Protected       |      |      |       |      |      |      |
| Satd. Flow (prot)   | 0    | 3539 | 3366  | 0    | 0    | 0    |
| Flt Permitted       |      |      |       |      |      |      |
| Satd. Flow (perm)   | 0    | 3539 | 3366  | 0    | 0    | 0    |
| Link Speed (mph)    |      | 35   | 35    |      | 25   |      |
| Link Distance (ft)  |      | 464  | 545   |      | 446  |      |
| Travel Time (s)     |      | 9.0  | 10.6  |      | 12.2 |      |

Intersection Summary

Area Type: Other

Lanes and Geometrics  
90: N Jordan St & Seminary Rd/ Seminary Rd

Existing 2010  
PM PEAK

| Lane Group          | EBT   | EBR  | WBL  | WBT   | NBL   | NBR   |
|---------------------|-------|------|------|-------|-------|-------|
| Lane Configurations | ↔↔    |      | ↔    | ↔↔    | ↔     | ↔     |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900  |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12    |
| Grade (%)           | 0%    |      |      | 0%    | 0%    |       |
| Storage Length (ft) |       | 0    | 0    |       | 0     | 250   |
| Storage Lanes       |       | 0    | 0    |       | 1     | 1     |
| Taper Length (ft)   |       |      | 50   |       | 50    |       |
| Lane Util. Factor   | 0.95  | 0.95 | 0.95 | 0.95  | 1.00  | 1.00  |
| Ped Bike Factor     | 0.99  |      |      |       |       | 0.99  |
| Frt                 | 0.960 |      |      |       |       | 0.850 |
| Flt Protected       |       |      |      | 0.997 | 0.950 |       |
| Satd. Flow (prot)   | 3371  | 0    | 0    | 3529  | 1770  | 1583  |
| Flt Permitted       |       |      |      | 0.714 | 0.950 |       |
| Satd. Flow (perm)   | 3371  | 0    | 0    | 2527  | 1770  | 1561  |
| Right Turn on Red   |       | Yes  |      |       | Yes   |       |
| Satd. Flow (RTOR)   | 68    |      |      |       |       | 16    |
| Link Speed (mph)    | 30    |      |      | 35    | 25    |       |
| Link Distance (ft)  | 759   |      |      | 744   | 1359  |       |
| Travel Time (s)     | 17.3  |      |      | 14.5  | 37.1  |       |

Intersection Summary

Area Type: Other

Timings  
90: N Jordan St & Seminary Rd/ Seminary Rd

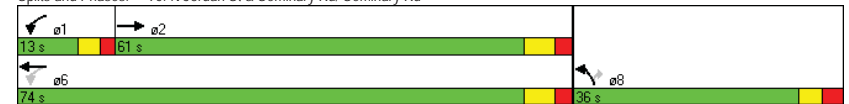
Existing 2010  
PM PEAK

| Lane Group           | EBT   | WBL   | WBT   | NBL   | NBR   |
|----------------------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔↔    |       | ↔↔    | ↔     | ↔     |
| Volume (vph)         | 1070  | 50    | 765   | 190   | 15    |
| Turn Type            | NA    | pm+pt | NA    | NA    | Perm  |
| Protected Phases     | 2     | 1     | 6     | 8     |       |
| Permitted Phases     |       | 6     |       |       | 8     |
| Detector Phase       | 2     | 1     | 6     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 10.0  | 6.0   | 16.0  | 6.0   | 6.0   |
| Minimum Split (s)    | 30.5  | 11.0  | 30.5  | 30.5  | 30.5  |
| Total Split (s)      | 61.0  | 13.0  | 74.0  | 36.0  | 36.0  |
| Total Split (%)      | 55.5% | 11.8% | 67.3% | 32.7% | 32.7% |
| Yellow Time (s)      | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.5   | 2.0   | 2.5   | 3.0   | 3.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.5   | 5.0   | 6.5   | 6.0   | 6.0   |
| Lead/Lag             | Lag   | Lead  |       |       |       |
| Lead-Lag Optimize?   | Yes   | Yes   |       |       |       |
| Recall Mode          | C-Max | None  | C-Max | None  | None  |
| Act Effct Green (s)  | 79.5  |       | 79.5  | 18.0  | 18.0  |
| Actuated g/C Ratio   | 0.72  |       | 0.72  | 0.16  | 0.16  |
| v/c Ratio            | 0.64  |       | 0.48  | 0.71  | 0.06  |
| Control Delay        | 23.2  |       | 8.1   | 56.3  | 15.7  |
| Queue Delay          | 0.1   |       | 0.0   | 0.0   | 0.0   |
| Total Delay          | 23.3  |       | 8.1   | 56.3  | 15.7  |
| LOS                  | C     |       | A     | E     | B     |
| Approach Delay       | 23.3  |       | 8.1   | 53.3  |       |
| Approach LOS         | C     |       | A     | D     |       |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 90 (82%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.71  
 Intersection Signal Delay: 20.8  
 Intersection Capacity Utilization 79.8%  
 Intersection LOS: C  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 90: N Jordan St & Seminary Rd/ Seminary Rd



Phasings  
90: N Jordan St & Seminary Rd/ Seminary Rd

Existing 2010  
PM PEAK

|                         | →     | ↖     | ←     | ↗     | ↘     |
|-------------------------|-------|-------|-------|-------|-------|
| Lane Group              | EBT   | WBL   | WBT   | NBL   | NBR   |
| Protected Phases        | 2     | 1     | 6     | 8     |       |
| Permitted Phases        |       | 6     |       |       | 8     |
| Minimum Initial (s)     | 10.0  | 6.0   | 16.0  | 6.0   | 6.0   |
| Minimum Split (s)       | 30.5  | 11.0  | 30.5  | 30.5  | 30.5  |
| Total Split (s)         | 61.0  | 13.0  | 74.0  | 36.0  | 36.0  |
| Total Split (%)         | 55.5% | 11.8% | 67.3% | 32.7% | 32.7% |
| Maximum Green (s)       | 54.5  | 8.0   | 67.5  | 30.0  | 30.0  |
| Yellow Time (s)         | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.5   | 2.0   | 2.5   | 3.0   | 3.0   |
| Lead/Lag                | Lag   | Lead  |       |       |       |
| Lead-Lag Optimize?      | Yes   | Yes   |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | C-Max | None  | C-Max | None  | None  |
| Walk Time (s)           | 12.0  |       | 12.0  | 4.0   | 4.0   |
| Flash Dont Walk (s)     | 12.0  |       | 12.0  | 12.0  | 12.0  |
| Pedestrian Calls (#/hr) | 0     |       | 0     | 0     | 0     |
| 90th %ile Green (s)     | 73.1  | 0.0   | 73.1  | 24.4  | 24.4  |
| 90th %ile Term Code     | Coord | Skip  | Coord | Gap   | Gap   |
| 70th %ile Green (s)     | 76.9  | 0.0   | 76.9  | 20.6  | 20.6  |
| 70th %ile Term Code     | Coord | Skip  | Coord | Gap   | Gap   |
| 50th %ile Green (s)     | 79.5  | 0.0   | 79.5  | 18.0  | 18.0  |
| 50th %ile Term Code     | Coord | Skip  | Coord | Gap   | Gap   |
| 30th %ile Green (s)     | 82.2  | 0.0   | 82.2  | 15.3  | 15.3  |
| 30th %ile Term Code     | Coord | Skip  | Coord | Gap   | Gap   |
| 10th %ile Green (s)     | 86.0  | 0.0   | 86.0  | 11.5  | 11.5  |
| 10th %ile Term Code     | Coord | Skip  | Coord | Gap   | Gap   |

| Intersection Summary  |  |  |  |  |  |
|---|--|--|--|--|--|
| Cycle Length: 110   |  |  |  |  |  |
| Actuated Cycle Length: 110  |  |  |  |  |  |
| Offset: 90 (82%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow |  |  |  |  |  |
| Control Type: Actuated-Coordinated                                      |  |  |  |  |  |

Lanes and Geometrics  
93: Hammond M.S./Encore Apts & Seminary Rd

Existing 2010  
PM PEAK

|                     | ↖    | →     | ↗    | ↖    | ←     | ↗    | ↖    | ↖     | ↖     | ↖     | ↖    | ↖    | ↖     |
|---------------------|------|-------|------|------|-------|------|------|-------|-------|-------|------|------|-------|
| Lane Group          | EBL  | EBT   | EBR  | WBL  | WBT   | WBR  | NBL  | NBT   | NBR   | SBL   | SBT  | SBR  | SBR   |
| Lane Configurations |      | ↕↕    |      |      | ↕↕↕   |      |      | ↕     | ↕     | ↕     |      |      | ↕     |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900  | 1900  | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12    | 12    | 12   | 12   | 12    |
| Grade (%)           |      | 0%    |      |      | 0%    |      |      | 0%    |       |       |      | 0%   |       |
| Storage Length (ft) | 0    |       | 0    | 0    |       | 50   | 0    |       | 0     | 0     |      | 0    | 0     |
| Storage Lanes       | 0    |       | 0    | 0    |       | 1    | 0    |       | 1     | 1     |      | 1    | 1     |
| Taper Length (ft)   | 50   |       |      | 50   |       |      | 50   |       |       | 50    |      |      |       |
| Lane Util. Factor   | 0.95 | 0.95  | 1.00 | 1.00 | 0.91  | 0.91 | 1.00 | 1.00  | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  |
| Ped Bike Factor     |      |       |      |      | 0.996 |      |      |       | 0.850 |       |      |      | 0.850 |
| Flt Protected       |      | 0.999 |      |      |       |      |      | 0.950 |       | 0.950 |      |      |       |
| Satd. Flow (prot)   | 0    | 3536  | 0    | 0    | 5065  | 0    | 0    | 1770  | 1583  | 1770  | 0    | 1583 |       |
| Flt Permitted       |      | 0.999 |      |      |       |      |      | 0.950 |       | 0.950 |      |      |       |
| Satd. Flow (perm)   | 0    | 3536  | 0    | 0    | 5065  | 0    | 0    | 1770  | 1583  | 1770  | 0    | 1583 |       |
| Link Speed (mph)    |      | 35    |      |      | 35    |      |      | 25    |       | 25    |      | 25   |       |
| Link Distance (ft)  |      | 239   |      |      | 295   |      |      | 257   |       | 372   |      | 372  |       |
| Travel Time (s)     |      | 4.7   |      |      | 5.7   |      |      | 7.0   |       | 10.1  |      | 10.1 |       |

| Intersection Summary |       |
|----------------------|-------|
| Area Type:           | Other |

Lanes and Geometrics  
100: Kenmore Ave & Seminary Rd

Existing 2010  
PM PEAK

| Lane Group          | EBL  | EBT   | EBR  | WBL  | WBT   | WBR  | NBL  | NBT  | NBR   | SBL  | SBT  | SBR   |
|---------------------|------|-------|------|------|-------|------|------|------|-------|------|------|-------|
| Lane Configurations |      |       |      |      |       |      |      |      |       |      |      |       |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12   | 12    | 12   | 12   | 12    |
| Grade (%)           |      | 0%    |      |      | 0%    |      |      | 0%   |       |      | 0%   |       |
| Storage Length (ft) | 0    |       | 0    | 0    |       | 0    | 0    |      | 0     | 0    |      | 0     |
| Storage Lanes       | 0    |       | 0    | 0    |       | 0    |      |      | 1     | 0    |      | 1     |
| Taper Length (ft)   | 50   |       |      | 50   |       |      | 50   |      |       | 50   |      |       |
| Lane Util. Factor   | 1.00 | 0.91  | 0.91 | 1.00 | 0.91  | 0.91 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  |
| Ped Bike Factor     |      |       |      |      |       |      |      |      |       |      |      |       |
| Frt                 |      | 0.979 |      |      | 0.993 |      |      |      | 0.865 |      |      | 0.865 |
| Flt Protected       |      |       |      |      |       |      |      |      |       |      |      |       |
| Satd. Flow (prot)   | 0    | 4979  | 0    | 0    | 5050  | 0    | 0    | 0    | 1611  | 0    | 0    | 1611  |
| Flt Permitted       |      |       |      |      |       |      |      |      |       |      |      |       |
| Satd. Flow (perm)   | 0    | 4979  | 0    | 0    | 5050  | 0    | 0    | 0    | 1611  | 0    | 0    | 1611  |
| Link Speed (mph)    |      | 35    |      |      | 35    |      |      |      | 30    |      |      | 25    |
| Link Distance (ft)  |      | 120   |      |      | 234   |      |      |      | 790   |      |      | 676   |
| Travel Time (s)     |      | 2.3   |      |      | 4.6   |      |      |      | 18.0  |      |      | 18.4  |

**Intersection Summary**  
Area Type: Other

Lanes and Geometrics  
191: I-395 SB On-Ramp & Seminary Rd (S)

Existing 2010  
PM PEAK

| Lane Group          | EBL  | EBT  | EBR   | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL   | SBT   | SBR  |
|---------------------|------|------|-------|------|------|------|------|------|------|-------|-------|------|
| Lane Configurations |      |      |       |      |      |      |      |      |      |       |       |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12   | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12    | 12    | 12   |
| Grade (%)           |      | 0%   |       |      | 0%   |      |      | 0%   |      |       | 0%    |      |
| Storage Length (ft) | 0    |      | 0     | 0    |      | 0    | 0    |      | 0    | 0     |       | 0    |
| Storage Lanes       | 0    |      | 1     | 0    |      | 0    | 0    |      | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50   |      |       | 50   |      |      | 50   |      |      | 50    |       |      |
| Lane Util. Factor   | 1.00 | 0.91 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91  | 0.91  | 1.00 |
| Ped Bike Factor     |      |      |       |      |      |      |      |      |      |       |       |      |
| Frt                 |      |      | 0.850 |      |      |      |      |      |      |       |       |      |
| Flt Protected       |      |      |       |      |      |      |      |      |      | 0.950 | 0.971 |      |
| Satd. Flow (prot)   | 0    | 5085 | 1583  | 0    | 0    | 0    | 0    | 0    | 0    | 1610  | 3292  | 0    |
| Flt Permitted       |      |      |       |      |      |      |      |      |      | 0.950 | 0.971 |      |
| Satd. Flow (perm)   | 0    | 5085 | 1583  | 0    | 0    | 0    | 0    | 0    | 0    | 1610  | 3292  | 0    |
| Right Turn on Red   |      |      | Yes   |      |      | Yes  |      |      |      | Yes   | Yes   | Yes  |
| Satd. Flow (RTOR)   |      |      | 752   |      |      |      |      |      |      | 10    | 10    |      |
| Link Speed (mph)    |      | 35   |       |      | 35   |      |      |      |      | 35    |       | 35   |
| Link Distance (ft)  |      | 352  |       |      | 349  |      |      |      |      | 797   |       | 278  |
| Travel Time (s)     |      | 6.9  |       |      | 6.8  |      |      |      |      | 15.5  |       | 5.4  |

**Intersection Summary**  
Area Type: Other

Timings  
191: I-395 SB On-Ramp & Seminary Rd (S)

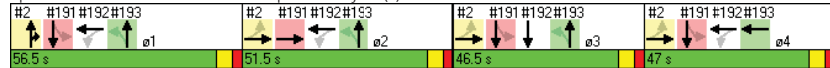
Existing 2010  
PM PEAK

|                      | →     | ↘     | ↙     | ↓     | ø1   | ø3   | ø4   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Group           | EBT   | EBR   | SBL   | SBT   |      |      |      |
| Lane Configurations  | ↑↑↑   | ↑     | ↘     | ↙     |      |      |      |
| Volume (vph)         | 770   | 1080  | 685   | 225   |      |      |      |
| Turn Type            | NA    | Free  | Perm  | NA    |      |      |      |
| Protected Phases     | 2     |       |       | 1 3 4 | 1    | 3    | 4    |
| Permitted Phases     |       | Free  | 1 3 4 |       |      |      |      |
| Detector Phase       | 2     |       | 1 3 4 | 1 3 4 |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  | 10.0  |       |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    | 22.5  |       |       |       | 22.5 | 22.5 | 23.0 |
| Total Split (s)      | 51.5  | 0.0   | 150.0 | 150.0 | 56.5 | 46.5 | 47.0 |
| Total Split (%)      | 25.6% | 0.0%  | 74.4% | 74.4% | 28%  | 23%  | 23%  |
| Yellow Time (s)      | 4.0   |       |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     | 2.5   |       |       |       | 2.5  | 2.5  | 3.0  |
| Lost Time Adjust (s) | -2.5  | 0.0   | -2.5  | -2.5  |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             | Lag   |       |       |       | Lead | Lead | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          | Min   |       |       |       | Min  | Min  | Min  |
| Act Effct Green (s)  | 47.5  | 201.5 | 146.0 | 146.0 |      |      |      |
| Actuated g/C Ratio   | 0.24  | 1.00  | 0.72  | 0.72  |      |      |      |
| v/c Ratio            | 0.67  | 0.71  | 0.31  | 0.25  |      |      |      |
| Control Delay        | 73.1  | 2.7   | 3.1   | 2.8   |      |      |      |
| Queue Delay          | 0.0   | 0.0   | 2.7   | 1.4   |      |      |      |
| Total Delay          | 73.1  | 2.7   | 5.8   | 4.2   |      |      |      |
| LOS                  | E     | A     | A     | A     |      |      |      |
| Approach Delay       | 32.0  |       |       | 4.8   |      |      |      |
| Approach LOS         | C     |       |       | A     |      |      |      |

Intersection Summary

|   |                        |
|---|------------------------|
| Cycle Length: 201.5                     |                        |
| Actuated Cycle Length: 201.5            |                        |
| Natural Cycle: 145                      |                        |
| Control Type: Actuated-Uncoordinated    |                        |
| Maximum v/c Ratio: 1.58                 |                        |
| Intersection Signal Delay: 23.0         | Intersection LOS: C    |
| Intersection Capacity Utilization 51.0% | ICU Level of Service A |
| Analysis Period (min) 15                |                        |

Splits and Phases: 191: I-395 SB On-Ramp & Seminary Rd (S)



Phasings  
191: I-395 SB On-Ramp & Seminary Rd (S)

Existing 2010  
PM PEAK

|                         | →     | ↘    | ↙     | ↓     | ø1   | ø3   | ø4   |
|-------------------------|-------|------|-------|-------|------|------|------|
| Lane Group              | EBT   | EBR  | SBL   | SBT   |      |      |      |
| Protected Phases        | 2     |      |       | 1 3 4 | 1    | 3    | 4    |
| Permitted Phases        |       | Free | 1 3 4 |       |      |      |      |
| Minimum Initial (s)     | 10.0  |      |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       | 22.5  |      |       |       | 22.5 | 22.5 | 23.0 |
| Total Split (s)         | 51.5  | 0.0  | 150.0 | 150.0 | 56.5 | 46.5 | 47.0 |
| Total Split (%)         | 25.6% | 0.0% | 74.4% | 74.4% | 28%  | 23%  | 23%  |
| Maximum Green (s)       | 45.0  |      |       |       | 50.0 | 40.0 | 40.0 |
| Yellow Time (s)         | 4.0   |      |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        | 2.5   |      |       |       | 2.5  | 2.5  | 3.0  |
| Lead/Lag                | Lag   |      |       |       | Lead | Lead | Lag  |
| Lead-Lag Optimize?      |       |      |       |       |      |      |      |
| Vehicle Extension (s)   | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Minimum Gap (s)         | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Recall Mode             | Min   |      |       |       | Min  | Min  | Min  |
| Walk Time (s)           |       |      |       |       |      |      |      |
| Flash Dont Walk (s)     |       |      |       |       |      |      |      |
| Pedestrian Calls (#/hr) |       |      |       |       |      |      |      |
| 90th %ile Green (s)     | 45.0  |      |       |       | 50.0 | 40.0 | 40.0 |
| 90th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 70th %ile Green (s)     | 45.0  |      |       |       | 50.0 | 40.0 | 40.0 |
| 70th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 50th %ile Green (s)     | 45.0  |      |       |       | 50.0 | 40.0 | 40.0 |
| 50th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 30th %ile Green (s)     | 45.0  |      |       |       | 50.0 | 40.0 | 40.0 |
| 30th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 10th %ile Green (s)     | 45.0  |      |       |       | 50.0 | 40.0 | 40.0 |
| 10th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |

Intersection Summary

|                                      |
|--------------------------------------|
| Cycle Length: 201.5                  |
| Actuated Cycle Length: 201.5         |
| Control Type: Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: 201.5      |
| 70th %ile Actuated Cycle: 201.5      |
| 50th %ile Actuated Cycle: 201.5      |
| 30th %ile Actuated Cycle: 201.5      |
| 10th %ile Actuated Cycle: 201.5      |



Lanes and Geometrics

192: I-395 SB On-Ramp/I-395 SB Off-Ramp & Seminary Rd (N)

Existing 2010

PM PEAK

| Lane Group          | EBL  | EBT  | EBR  | WBL  | WBT   | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR   |
|---------------------|------|------|------|------|-------|------|------|------|------|------|------|-------|
| Lane Configurations |      |      |      |      | ↑↑    |      |      |      |      |      | ↑↑   | ↑     |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12   | 12   | 12   | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12    |
| Grade (%)           |      | 0%   |      |      | 0%    |      |      | 0%   |      |      | 0%   |       |
| Storage Length (ft) | 0    |      | 0    | 0    |       | 0    | 0    |      | 0    | 0    |      | 320   |
| Storage Lanes       | 0    |      | 0    | 0    |       | 0    | 0    |      | 0    | 0    |      | 1     |
| Taper Length (ft)   | 50   |      |      | 50   |       |      | 50   |      |      | 50   |      |       |
| Lane Util. Factor   | 1.00 | 1.00 | 1.00 | 0.95 | 0.95  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00  |
| Ped Bike Factor     |      |      |      |      |       |      |      |      |      |      |      | 0.850 |
| Frt Protected       |      |      |      |      | 0.985 |      |      |      |      |      |      |       |
| Satd. Flow (prot)   | 0    | 0    | 0    | 0    | 3486  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583  |
| Frt Permitted       |      |      |      |      | 0.985 |      |      |      |      |      |      |       |
| Satd. Flow (perm)   | 0    | 0    | 0    | 0    | 3486  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583  |
| Right Turn on Red   |      |      | Yes  | Yes  |       | Yes  |      |      | Yes  |      |      | Yes   |
| Satd. Flow (RTOR)   |      |      |      |      | 16    |      |      |      |      |      |      | 311   |
| Link Speed (mph)    |      | 30   |      |      | 35    |      |      | 35   |      |      | 35   |       |
| Link Distance (ft)  |      | 344  |      |      | 306   |      |      | 278  |      |      | 1472 |       |
| Travel Time (s)     |      | 7.8  |      |      | 6.0   |      |      | 5.4  |      |      | 28.7 |       |

Intersection Summary

Area Type: Other

Timings

192: I-395 SB On-Ramp/I-395 SB Off-Ramp & Seminary Rd (N)

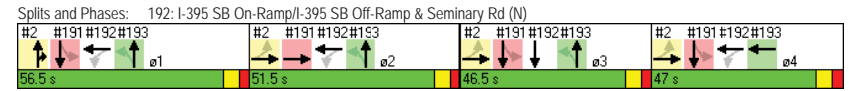
Existing 2010

PM PEAK

| Lane Group           | WBT   | SBT   | SBR   | ø1   | ø2   | ø4   |
|----------------------|-------|-------|-------|------|------|------|
| Lane Configurations  | ↑↑    | ↑↑    | ↑     |      |      |      |
| Volume (vph)         | 675   | 625   | 415   |      |      |      |
| Turn Type            | NA    | NA    | Free  |      |      |      |
| Protected Phases     | 1 2 4 | 3     |       | 1    | 2    | 4    |
| Permitted Phases     |       |       | Free  |      |      |      |
| Detector Phase       | 1 2 4 | 3     |       |      |      |      |
| Switch Phase         |       |       |       |      |      |      |
| Minimum Initial (s)  |       | 10.0  |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    |       | 22.5  |       | 22.5 | 22.5 | 23.0 |
| Total Split (s)      | 155.0 | 46.5  | 0.0   | 56.5 | 51.5 | 47.0 |
| Total Split (%)      | 76.9% | 23.1% | 0.0%  | 28%  | 26%  | 23%  |
| Yellow Time (s)      |       | 4.0   |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     |       | 2.5   |       | 2.5  | 2.5  | 3.0  |
| Lost Time Adjust (s) | -2.5  | -2.5  | 0.0   |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             |       | Lead  |       | Lead | Lag  | Lag  |
| Lead-Lag Optimize?   |       |       |       |      |      |      |
| Recall Mode          |       | Min   |       | Min  | Min  | Min  |
| Act Effct Green (s)  | 151.0 | 42.5  | 201.5 |      |      |      |
| Actuated g/C Ratio   | 0.75  | 0.21  | 1.00  |      |      |      |
| v/c Ratio            | 0.38  | 0.87  | 0.27  |      |      |      |
| Control Delay        | 3.0   | 90.1  | 0.4   |      |      |      |
| Queue Delay          | 0.5   | 0.0   | 0.0   |      |      |      |
| Total Delay          | 3.5   | 90.1  | 0.4   |      |      |      |
| LOS                  | A     | F     | A     |      |      |      |
| Approach Delay       | 3.5   | 54.4  |       |      |      |      |
| Approach LOS         | A     | D     |       |      |      |      |


Intersection Summary

Cycle Length: 201.5  
 Actuated Cycle Length: 201.5  
 Natural Cycle Length: 145  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.58  
 Intersection Signal Delay: 29.9  
 Intersection LOS: C  
 Intersection Capacity Utilization 51.0%  
 ICU Level of Service A  
 Analysis Period (min) 15



Phasings  
192: I-395 SB On-Ramp/I-395 SB Off-Ramp & Seminary Rd (N)

Existing 2010  
PM PEAK




| Lane Group              | WBT   | SBT   | SBR  | ø1   | ø2   | ø4   |
|-------------------------|-------|-------|------|------|------|------|
| Protected Phases        | 1 2 4 | 3     |      | 1    | 2    | 4    |
| Permitted Phases        | Free  |       |      |      |      |      |
| Minimum Initial (s)     |       | 10.0  |      | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       |       | 22.5  |      | 22.5 | 22.5 | 23.0 |
| Total Split (s)         | 155.0 | 46.5  | 0.0  | 56.5 | 51.5 | 47.0 |
| Total Split (%)         | 76.9% | 23.1% | 0.0% | 28%  | 26%  | 23%  |
| Maximum Green (s)       |       | 40.0  |      | 50.0 | 45.0 | 40.0 |
| Yellow Time (s)         |       | 4.0   |      | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        |       | 2.5   |      | 2.5  | 2.5  | 3.0  |
| Lead/Lag                | Lead  |       |      | Lead |      | Lag  |
| Lead-Lag Optimize?      |       |       |      |      |      |      |
| Vehicle Extension (s)   |       | 3.0   |      | 5.0  | 3.0  | 3.0  |
| Minimum Gap (s)         |       | 3.0   |      | 5.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  |       | 0.0   |      | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      |       | 0.0   |      | 0.0  | 0.0  | 0.0  |
| Recall Mode             |       | Min   |      | Min  | Min  | Min  |
| Walk Time (s)           |       |       |      |      |      |      |
| Flash Dont Walk (s)     |       |       |      |      |      |      |
| Pedestrian Calls (#/hr) |       |       |      |      |      |      |
| 90th %ile Green (s)     |       | 40.0  |      | 50.0 | 45.0 | 40.0 |
| 90th %ile Term Code     |       | Max   |      | Max  | Max  | Max  |
| 70th %ile Green (s)     |       | 40.0  |      | 50.0 | 45.0 | 40.0 |
| 70th %ile Term Code     |       | Max   |      | Max  | Max  | Max  |
| 50th %ile Green (s)     |       | 40.0  |      | 50.0 | 45.0 | 40.0 |
| 50th %ile Term Code     |       | Max   |      | Max  | Max  | Max  |
| 30th %ile Green (s)     |       | 40.0  |      | 50.0 | 45.0 | 40.0 |
| 30th %ile Term Code     |       | Max   |      | Max  | Max  | Max  |
| 10th %ile Green (s)     |       | 40.0  |      | 50.0 | 45.0 | 40.0 |
| 10th %ile Term Code     |       | Max   |      | Max  | Max  | Max  |

Intersection Summary

|                                      |
|--------------------------------------|
| Cycle Length: 201.5                  |
| Actuated Cycle Length: 201.5         |
| Control Type: Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: 201.5      |
| 70th %ile Actuated Cycle: 201.5      |
| 50th %ile Actuated Cycle: 201.5      |
| 30th %ile Actuated Cycle: 201.5      |
| 10th %ile Actuated Cycle: 201.5      |

Lanes and Geometrics  
193: I-395 NB Off-Ramp/I-395 NB On-Ramp & Seminary Rd (N)

Existing 2010  
PM PEAK



| Lane Group          | EBL              | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------------------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |                  |      |      |      | ↑↑   | ↑↑   | ↑↑   | ↑↑   |      |      |      |      |
| Ideal Flow (vphpl)  | 1900             | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12               | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12   |
| Grade (%)           |                  | 0%   |      |      | 0%   |      |      | 0%   |      |      | 0%   |      |
| Storage Length (ft) |                  | 0    |      | 0    |      | 125  |      | 50   |      | 0    |      | 0    |
| Storage Lanes       |                  | 0    |      | 0    |      | 1    |      | 1    |      | 0    |      | 0    |
| Taper Length (ft)   |                  | 50   |      | 50   |      |      |      | 50   |      |      | 50   |      |
| Lane Util. Factor   | 1.00             | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor     |                  |      |      |      |      |      |      |      |      |      |      |      |
| Frt                 | 0.850            |      |      |      |      |      |      |      |      |      |      |      |
| Flt Protected       | 0.950            |      |      |      |      |      |      |      |      |      |      |      |
| Satd. Flow (prot)   | 0                | 0    | 0    | 0    | 3539 | 1583 | 1770 | 3539 | 0    | 0    | 0    | 0    |
| Flt Permitted       | 0.950            |      |      |      |      |      |      |      |      |      |      |      |
| Satd. Flow (perm)   | 0                | 0    | 0    | 0    | 3539 | 1583 | 1770 | 3539 | 0    | 0    | 0    | 0    |
| Right Turn on Red   |                  |      | Yes  |      | Yes  | Yes  | Yes  | Yes  |      |      |      | Yes  |
| Satd. Flow (RTOR)   | 187 149          |      |      |      |      |      |      |      |      |      |      |      |
| Link Speed (mph)    | 35               |      |      |      |      |      |      |      |      |      |      |      |
| Link Distance (ft)  | 306 238 294 1353 |      |      |      |      |      |      |      |      |      |      |      |
| Travel Time (s)     | 6.0 4.6 5.7 26.4 |      |      |      |      |      |      |      |      |      |      |      |

Intersection Summary

|            |       |
|------------|-------|
| Area Type: | Other |
|------------|-------|

Timings

193: I-395 NB Off-Ramp/I-395 NB On-Ramp & Seminary Rd (N)

Existing 2010

PM PEAK

| Lane Group           | WBT   | WBR   | NBL   | NBT   | ø1   | ø2   | ø3   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  | ↑↑    | ↑     | ↑     | ↑↑    |      |      |      |
| Volume (vph)         | 310   | 285   | 565   | 645   |      |      |      |
| Turn Type            | NA    | Free  | Perm  | NA    |      |      |      |
| Protected Phases     | 4     |       | 1 2 3 | 1 2 3 | 1    | 2    | 3    |
| Permitted Phases     |       | Free  | 1 2 3 |       |      |      |      |
| Detector Phase       | 4     |       | 1 2 3 | 1 2 3 |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  | 10.0  |       |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    | 23.0  |       |       |       | 22.5 | 22.5 | 22.5 |
| Total Split (s)      | 47.0  | 0.0   | 154.5 | 154.5 | 56.5 | 51.5 | 46.5 |
| Total Split (%)      | 23.3% | 0.0%  | 76.7% | 76.7% | 28%  | 26%  | 23%  |
| Yellow Time (s)      | 4.0   |       |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     | 3.0   |       |       |       | 2.5  | 2.5  | 2.5  |
| Lost Time Adjust (s) | -3.0  | 0.0   | -2.5  | -2.5  |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             | Lag   |       |       |       | Lead | Lag  | Lead |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          | Min   |       |       |       | Min  | Min  | Min  |
| Act Effct Green (s)  | 43.0  | 201.5 | 150.5 | 150.5 |      |      |      |
| Actuated g/C Ratio   | 0.21  | 1.00  | 0.75  | 0.75  |      |      |      |
| v/c Ratio            | 0.43  | 0.19  | 0.43  | 0.25  |      |      |      |
| Control Delay        | 70.7  | 0.3   | 0.8   | 2.4   |      |      |      |
| Queue Delay          | 0.0   | 0.0   | 6.4   | 2.8   |      |      |      |
| Total Delay          | 70.7  | 0.3   | 7.2   | 5.1   |      |      |      |
| LOS                  | E     | A     | A     | A     |      |      |      |
| Approach Delay       | 37.0  |       |       | 6.1   |      |      |      |
| Approach LOS         | D     |       |       | A     |      |      |      |

Intersection Summary

|  |                        |
|--|------------------------|
| Cycle Length: 201.5                      |                        |
| Actuated Cycle Length: 201.5             |                        |
| Natural Cycle: 145                       |                        |
| Control Type: Actuated-Uncoordinated     |                        |
| Maximum v/c Ratio: 1.58                  |                        |
| Intersection Signal Delay: 16.3          | Intersection LOS: B    |
| Intersection Capacity Utilization 109.2% | ICU Level of Service H |
| Analysis Period (min) 15                 |                        |

Splits and Phases: 193: I-395 NB Off-Ramp/I-395 NB On-Ramp & Seminary Rd (N)



Phasings

193: I-395 NB Off-Ramp/I-395 NB On-Ramp & Seminary Rd (N)

Existing 2010

PM PEAK

| Lane Group              | WBT   | WBR  | NBL   | NBT   | ø1   | ø2   | ø3   |
|-------------------------|-------|------|-------|-------|------|------|------|
| Protected Phases        | 4     |      |       | 1 2 3 | 1    | 2    | 3    |
| Permitted Phases        |       | Free | 1 2 3 |       |      |      |      |
| Minimum Initial (s)     | 10.0  |      |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       | 23.0  |      |       |       | 22.5 | 22.5 | 22.5 |
| Total Split (s)         | 47.0  | 0.0  | 154.5 | 154.5 | 56.5 | 51.5 | 46.5 |
| Total Split (%)         | 23.3% | 0.0% | 76.7% | 76.7% | 28%  | 26%  | 23%  |
| Maximum Green (s)       | 40.0  |      |       |       | 50.0 | 45.0 | 40.0 |
| Yellow Time (s)         | 4.0   |      |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        | 3.0   |      |       |       | 2.5  | 2.5  | 2.5  |
| Lead/Lag                | Lag   |      |       |       | Lead | Lag  | Lead |
| Lead-Lag Optimize?      |       |      |       |       |      |      |      |
| Vehicle Extension (s)   | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Minimum Gap (s)         | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Recall Mode             | Min   |      |       |       | Min  | Min  | Min  |
| Walk Time (s)           |       |      |       |       |      |      |      |
| Flash Dont Walk (s)     |       |      |       |       |      |      |      |
| Pedestrian Calls (#/hr) |       |      |       |       |      |      |      |
| 90th %ile Green (s)     | 40.0  |      |       |       | 50.0 | 45.0 | 40.0 |
| 90th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 70th %ile Green (s)     | 40.0  |      |       |       | 50.0 | 45.0 | 40.0 |
| 70th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 50th %ile Green (s)     | 40.0  |      |       |       | 50.0 | 45.0 | 40.0 |
| 50th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 30th %ile Green (s)     | 40.0  |      |       |       | 50.0 | 45.0 | 40.0 |
| 30th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 10th %ile Green (s)     | 40.0  |      |       |       | 50.0 | 45.0 | 40.0 |
| 10th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |

Intersection Summary

|                                      |
|--------------------------------------|
| Cycle Length: 201.5                  |
| Actuated Cycle Length: 201.5         |
| Control Type: Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: 201.5      |
| 70th %ile Actuated Cycle: 201.5      |
| 50th %ile Actuated Cycle: 201.5      |
| 30th %ile Actuated Cycle: 201.5      |
| 10th %ile Actuated Cycle: 201.5      |



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**D Appendix D: Year 2035 Baseline Lanes, Timings & Phasing (Synchro)**

The following pages are analysis reports generated by Synchro.



Updated 2035 Baseline with Recommended Improvements  
1: N Pickett St/N Pickett St/Fire Station & Seminary Rd

AM PEAK  
10/22/2011

| Lane Group          | EBL  | EBT  | EBR  | WBL  | WBT   | WBR  | NBL  | NBT  | NBR   | SBL  | SBT  | SBR   |
|---------------------|------|------|------|------|-------|------|------|------|-------|------|------|-------|
| Lane Configurations |      | ↔    |      | ↔    | ↔     |      |      | ↔    | ↔     |      | ↔    |       |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12   | 12   | 12   | 12    | 12   | 12   | 12   | 12    | 12   | 12   | 12    |
| Grade (%)           |      | 0%   |      |      | 0%    |      |      | 0%   |       |      | 0%   |       |
| Storage Length (ft) | 0    |      | 0    | 0    |       | 0    | 0    |      | 50    | 0    |      | 0     |
| Storage Lanes       | 0    |      | 0    | 0    |       | 0    | 0    |      | 1     | 0    |      | 0     |
| Taper Length (ft)   | 50   |      |      | 50   |       |      | 50   |      |       | 50   |      |       |
| Lane Util. Factor   | 0.95 | 0.95 | 0.95 | 0.95 | 0.95  | 0.95 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  |
| Ped Bike Factor     |      |      |      |      |       |      |      |      | 0.98  |      |      | 0.850 |
| Frt Protected       |      |      |      |      | 0.997 |      |      |      | 0.950 |      |      |       |
| Satd. Flow (prot)   | 0    | 3454 | 0    | 0    | 3529  | 0    | 0    | 1770 | 1583  | 0    | 1863 | 0     |
| Frt Permitted       |      |      |      |      | 0.682 |      |      |      | 0.950 |      |      |       |
| Satd. Flow (perm)   | 0    | 3454 | 0    | 0    | 2414  | 0    | 0    | 1770 | 1555  | 0    | 1863 | 0     |
| Right Turn on Red   |      |      | Yes  |      |       | Yes  |      |      | Yes   |      |      | Yes   |
| Satd. Flow (RTOR)   |      | 21   |      |      |       |      |      |      | 99    |      |      |       |
| Link Speed (mph)    |      | 35   |      |      | 35    |      |      |      | 25    |      |      | 25    |
| Link Distance (ft)  |      | 295  |      |      | 759   |      |      |      | 843   |      |      | 257   |
| Travel Time (s)     |      | 5.7  |      |      | 14.8  |      |      |      | 23.0  |      |      | 7.0   |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
1: N Pickett St/N Pickett St/Fire Station & Seminary Rd

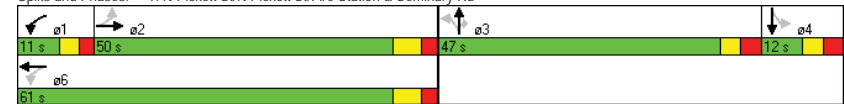
AM PEAK  
10/22/2011

| Lane Group           | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | ø4   |
|----------------------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations  | ↔     | ↔     | ↔     |       | ↔     | ↔     |      |
| Volume (vph)         | 550   | 95    | 1450  | 145   | 0     | 105   |      |
| Turn Type            | NA    | pm+pt | NA    | Perm  | NA    | Perm  |      |
| Protected Phases     | 2     | 1     | 6     |       | 3     |       | 4    |
| Permitted Phases     |       | 6     |       | 3     |       | 3     |      |
| Detector Phase       | 2     | 1     | 6     | 3     | 3     | 3     |      |
| Switch Phase         |       |       |       |       |       |       |      |
| Minimum Initial (s)  | 10.0  | 5.0   | 10.0  | 7.0   | 7.0   | 7.0   | 5.0  |
| Minimum Split (s)    | 46.5  | 10.0  | 16.5  | 31.0  | 31.0  | 31.0  | 11.0 |
| Total Split (s)      | 50.0  | 11.0  | 61.0  | 47.0  | 47.0  | 47.0  | 12.0 |
| Total Split (%)      | 41.7% | 9.2%  | 50.8% | 39.2% | 39.2% | 39.2% | 10%  |
| Yellow Time (s)      | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| All-Red Time (s)     | 2.5   | 2.0   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0  |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      |
| Total Lost Time (s)  | 6.5   | 5.0   | 6.5   | 6.0   | 6.0   | 6.0   |      |
| Lead/Lag             | Lag   | Lead  |       | Lead  | Lead  | Lead  | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |       |       |      |
| Recall Mode          | C-Max | Max   | C-Max | None  | None  | None  | None |
| Act Effct Green (s)  | 43.5  |       | 66.5  |       | 41.0  | 41.0  |      |
| Actuated g/C Ratio   | 0.36  |       | 0.55  |       | 0.34  | 0.34  |      |
| v/c Ratio            | 0.56  |       | 1.11  |       | 0.26  | 0.19  |      |
| Control Delay        | 28.6  |       | 79.2  |       | 30.0  | 7.8   |      |
| Queue Delay          | 2.3   |       | 2.3   |       | 0.0   | 0.0   |      |
| Total Delay          | 30.9  |       | 81.5  |       | 30.0  | 7.8   |      |
| LOS                  | C     |       | F     |       | C     | A     |      |
| Approach Delay       | 30.9  |       | 81.5  |       | 20.7  |       |      |
| Approach LOS         | C     |       | F     |       | C     |       |      |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 101 (84%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.11  
 Intersection Signal Delay: 61.8  
 Intersection LOS: E  
 Intersection Capacity Utilization 86.9%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 1: N Pickett St/N Pickett St/Fire Station & Seminary Rd



Updated 2035 Baseline with Recommended Improvements  
1: N Pickett St/N Pickett St/Fire Station & Seminary Rd

AM PEAK  
10/22/2011

| Lane Group              | EBT   | WBL  | WBT   | NBL   | NBT   | NBR   | ø4   |
|-------------------------|-------|------|-------|-------|-------|-------|------|
| Protected Phases        | 2     | 1    | 6     |       | 3     |       | 4    |
| Permitted Phases        |       | 6    |       | 3     |       | 3     |      |
| Minimum Initial (s)     | 10.0  | 5.0  | 10.0  | 7.0   | 7.0   | 7.0   | 5.0  |
| Minimum Split (s)       | 46.5  | 10.0 | 16.5  | 31.0  | 31.0  | 31.0  | 11.0 |
| Total Split (s)         | 50.0  | 11.0 | 61.0  | 47.0  | 47.0  | 47.0  | 12.0 |
| Total Split (%)         | 41.7% | 9.2% | 50.8% | 39.2% | 39.2% | 39.2% | 10%  |
| Maximum Green (s)       | 43.5  | 6.0  | 54.5  | 41.0  | 41.0  | 41.0  | 6.0  |
| Yellow Time (s)         | 4.0   | 3.0  | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| All-Red Time (s)        | 2.5   | 2.0  | 2.5   | 3.0   | 3.0   | 3.0   | 3.0  |
| Lead/Lag                | Lag   | Lead |       | Lead  | Lead  | Lead  | Lag  |
| Lead-Lag Optimize?      |       |      |       |       |       |       |      |
| Vehicle Extension (s)   | 4.0   | 4.0  | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| Minimum Gap (s)         | 4.0   | 4.0  | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| Time Before Reduce (s)  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Time To Reduce (s)      | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Recall Mode             | C-Max | Max  | C-Max | None  | None  | None  | None |
| Walk Time (s)           | 22.0  |      |       | 7.0   | 7.0   | 7.0   |      |
| Flash Dont Walk (s)     | 18.0  |      |       | 18.0  | 18.0  | 18.0  |      |
| Pedestrian Calls (#/hr) | 0     |      |       | 0     | 0     | 0     |      |
| 90th %ile Green (s)     | 43.5  | 18.0 | 66.5  | 41.0  | 41.0  | 41.0  | 0.0  |
| 90th %ile Term Code     | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |
| 70th %ile Green (s)     | 43.5  | 18.0 | 66.5  | 41.0  | 41.0  | 41.0  | 0.0  |
| 70th %ile Term Code     | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |
| 50th %ile Green (s)     | 43.5  | 18.0 | 66.5  | 41.0  | 41.0  | 41.0  | 0.0  |
| 50th %ile Term Code     | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |
| 30th %ile Green (s)     | 43.5  | 18.0 | 66.5  | 41.0  | 41.0  | 41.0  | 0.0  |
| 30th %ile Term Code     | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |
| 10th %ile Green (s)     | 43.5  | 18.0 | 66.5  | 41.0  | 41.0  | 41.0  | 0.0  |
| 10th %ile Term Code     | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |

Intersection Summary

Cycle Length: 120  
Actuated Cycle Length: 120  
Offset: 101 (84%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  
Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
2: I-395 NB Off-Ramp & Seminary Rd (S)

AM PEAK  
10/22/2011

| Lane Group          | EBL   | EBT   | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR   | SBL  | SBT  | SBR  |
|---------------------|-------|-------|------|------|------|------|------|------|-------|------|------|------|
| Lane Configurations |       |       |      |      |      |      |      |      |       |      |      |      |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           |       | 0%    |      |      | 0%   |      |      | 0%   |       |      | 0%   |      |
| Storage Length (ft) | 0     |       | 0    | 0    |      | 0    | 0    |      | 600   | 0    |      | 0    |
| Storage Lanes       | 1     |       | 0    | 0    |      | 0    | 0    |      | 1     | 0    |      | 0    |
| Taper Length (ft)   | 50    |       |      | 50   |      |      | 50   |      |       | 50   |      |      |
| Lane Util. Factor   | 0.91  | 0.91  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00  | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor     |       |       |      |      |      |      |      |      | 0.850 |      |      |      |
| Flt Protected       | 0.950 | 0.968 |      |      |      |      |      |      |       |      |      |      |
| Satd. Flow (prot)   | 1610  | 3282  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583  | 0    | 0    | 0    |
| Flt Permitted       | 0.950 | 0.968 |      |      |      |      |      |      |       |      |      |      |
| Satd. Flow (perm)   | 1610  | 3282  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583  | 0    | 0    | 0    |
| Right Turn on Red   | Yes   |       | Yes  |      |      | Yes  |      |      | Yes   |      |      | Yes  |
| Satd. Flow (RTOR)   | 21    | 21    |      |      |      |      |      |      | 204   |      |      |      |
| Link Speed (mph)    |       | 35    |      |      | 35   |      |      |      | 35    |      |      | 35   |
| Link Distance (ft)  |       | 349   |      |      | 315  |      |      |      | 1292  |      |      | 294  |
| Travel Time (s)     |       | 6.8   |      |      | 6.1  |      |      |      | 25.2  |      |      | 5.7  |

Intersection Summary

Area Type: Other



Updated 2035 Baseline with Recommended Improvements  
2: I-395 NB Off-Ramp & Seminary Rd (S)

AM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | NBT   | NBR   | ø2   | ø3   | ø4   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  |       |       |       |       |      |      |      |
| Volume (vph)         | 890   | 225   | 965   | 190   |      |      |      |
| Turn Type            | Perm  | NA    | NA    | Perm  |      |      |      |
| Protected Phases     |       | 2 3 4 | 1     |       | 2    | 3    | 4    |
| Permitted Phases     | 2 3 4 |       |       | 1     |      |      |      |
| Detector Phase       | 2 3 4 | 2 3 4 | 1     | 1     |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  |       |       | 10.0  | 10.0  | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    |       |       | 22.5  | 22.5  | 22.5 | 22.5 | 23.0 |
| Total Split (s)      | 112.0 | 112.0 | 68.0  | 68.0  | 66.5 | 22.5 | 23.0 |
| Total Split (%)      | 62.2% | 62.2% | 37.8% | 37.8% | 37%  | 13%  | 13%  |
| Yellow Time (s)      |       |       | 4.0   | 4.0   | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     |       |       | 2.5   | 2.5   | 2.5  | 2.5  | 3.0  |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | -2.5  |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             |       |       | Lead  | Lead  | Lag  | Lead | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          |       |       | Min   | Min   | Min  | Min  | Min  |
| Act Effct Green (s)  | 108.0 | 108.0 | 64.0  | 64.0  |      |      |      |
| Actuated g/C Ratio   | 0.60  | 0.60  | 0.36  | 0.36  |      |      |      |
| v/c Ratio            | 0.49  | 0.36  | 0.83  | 0.29  |      |      |      |
| Control Delay        | 1.4   | 14.5  | 59.6  | 5.5   |      |      |      |
| Queue Delay          | 2.6   | 3.2   | 1.5   | 0.0   |      |      |      |
| Total Delay          | 4.0   | 17.7  | 61.1  | 5.5   |      |      |      |
| LOS                  | A     | B     | E     | A     |      |      |      |
| Approach Delay       |       | 12.2  | 52.0  |       |      |      |      |
| Approach LOS         |       | B     | D     |       |      |      |      |

Intersection Summary

|   |                        |
|---|------------------------|
| Cycle Length: 180                       |                        |
| Actuated Cycle Length: 180              |                        |
| Natural Cycle: 135                      |                        |
| Control Type: Actuated-Uncoordinated    |                        |
| Maximum v/c Ratio: 0.89                 |                        |
| Intersection Signal Delay: 32.5         | Intersection LOS: C    |
| Intersection Capacity Utilization 56.9% | ICU Level of Service B |
| Analysis Period (min) 15                |                        |

Splits and Phases: 2: I-395 NB Off-Ramp & Seminary Rd (S)



Updated 2035 Baseline with Recommended Improvements  
2: I-395 NB Off-Ramp & Seminary Rd (S)

AM PEAK  
10/22/2011

| Lane Group              | EBL   | EBT   | NBT   | NBR   | ø2   | ø3   | ø4   |
|-------------------------|-------|-------|-------|-------|------|------|------|
| Protected Phases        |       | 2 3 4 | 1     |       | 2    | 3    | 4    |
| Permitted Phases        | 2 3 4 |       |       | 1     |      |      |      |
| Minimum Initial (s)     |       |       | 10.0  | 10.0  | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       |       |       | 22.5  | 22.5  | 22.5 | 22.5 | 23.0 |
| Total Split (s)         | 112.0 | 112.0 | 68.0  | 68.0  | 66.5 | 22.5 | 23.0 |
| Total Split (%)         | 62.2% | 62.2% | 37.8% | 37.8% | 37%  | 13%  | 13%  |
| Maximum Green (s)       |       |       | 61.5  | 61.5  | 60.0 | 16.0 | 16.0 |
| Yellow Time (s)         |       |       | 4.0   | 4.0   | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        |       |       | 2.5   | 2.5   | 2.5  | 2.5  | 3.0  |
| Lead/Lag                |       |       | Lead  | Lead  | Lag  | Lead | Lag  |
| Lead-Lag Optimize?      |       |       |       |       |      |      |      |
| Vehicle Extension (s)   |       |       | 5.0   | 5.0   | 3.0  | 3.0  | 3.0  |
| Minimum Gap (s)         |       |       | 5.0   | 5.0   | 3.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  |       |       | 0.0   | 0.0   | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      |       |       | 0.0   | 0.0   | 0.0  | 0.0  | 0.0  |
| Recall Mode             |       |       | Min   | Min   | Min  | Min  | Min  |
| Walk Time (s)           |       |       |       |       |      |      |      |
| Flash Dont Walk (s)     |       |       |       |       |      |      |      |
| Pedestrian Calls (#/hr) |       |       |       |       |      |      |      |
| 90th %ile Green (s)     |       |       | 61.5  | 61.5  | 60.0 | 16.0 | 16.0 |
| 90th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 70th %ile Green (s)     |       |       | 61.5  | 61.5  | 60.0 | 16.0 | 16.0 |
| 70th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 50th %ile Green (s)     |       |       | 61.5  | 61.5  | 60.0 | 16.0 | 16.0 |
| 50th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 30th %ile Green (s)     |       |       | 61.5  | 61.5  | 60.0 | 16.0 | 16.0 |
| 30th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 10th %ile Green (s)     |       |       | 61.5  | 61.5  | 60.0 | 16.0 | 16.0 |
| 10th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |

Intersection Summary

|                                      |
|--------------------------------------|
| Cycle Length: 180                    |
| Actuated Cycle Length: 180           |
| Control Type: Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: 180        |
| 70th %ile Actuated Cycle: 180        |
| 50th %ile Actuated Cycle: 180        |
| 30th %ile Actuated Cycle: 180        |
| 10th %ile Actuated Cycle: 180        |

Updated 2035 Baseline with Recommended Improvements  
3: Seminary Rd (S)/Seminary Rd (N) & Seminary Rd

AM PEAK  
10/22/2011

| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR   |
|---------------------|------|-------|-------|------|------|------|------|------|------|------|------|-------|
| Lane Configurations |      | ↑↑    | ↑↑    |      | ↑↑   |      |      |      |      |      |      | ↑↑    |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12    |
| Grade (%)           |      | 0%    |       |      | 0%   |      |      | 0%   |      |      | 0%   |       |
| Storage Length (ft) | 0    |       | 0     | 0    |      | 0    | 0    |      | 0    | 0    |      | 0     |
| Storage Lanes       | 0    |       | 2     | 0    |      | 0    | 0    |      | 0    | 0    |      | 2     |
| Taper Length (ft)   | 50   |       |       | 50   |      |      | 50   |      |      | 50   |      |       |
| Lane Util. Factor   | 1.00 | 0.86  | 0.86  | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88  |
| Ped Bike Factor     |      |       |       |      |      |      |      |      |      |      |      |       |
| Frt                 |      | 0.919 | 0.850 |      |      |      |      |      |      |      |      | 0.850 |
| Flt Protected       |      |       |       |      |      |      |      |      |      |      |      |       |
| Satd. Flow (prot)   | 0    | 2944  | 2723  | 0    | 3539 | 0    | 0    | 0    | 0    | 0    | 0    | 2787  |
| Flt Permitted       |      |       |       |      |      |      |      |      |      |      |      |       |
| Satd. Flow (perm)   | 0    | 2944  | 2723  | 0    | 3539 | 0    | 0    | 0    | 0    | 0    | 0    | 2787  |
| Link Speed (mph)    |      | 35    |       |      | 35   |      |      | 35   |      |      | 35   |       |
| Link Distance (ft)  |      | 358   |       |      | 849  |      |      | 315  |      |      | 399  |       |
| Travel Time (s)     |      | 7.0   |       |      | 16.5 |      |      | 6.1  |      |      | 7.8  |       |

**Intersection Summary**  
Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
7: Beauregard St/S Walter Reed Dr & King St


AM PEAK  
10/22/2011

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT  | SBR   |
|---------------------|-------|-------|------|-------|-------|------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↑↑    | ↑↑    |      | ↑↑    | ↑↑    |      |       | ↑↑    | ↑↑   |       | ↑↑   | ↑↑    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12   | 12    |
| Grade (%)           |       | 0%    |      |       | 0%    |      |       | 0%    |      |       | 0%   |       |
| Storage Length (ft) | 230   |       | 0    | 225   |       | 0    | 400   |       | 0    | 160   |      | 140   |
| Storage Lanes       | 2     |       | 0    | 2     |       | 0    | 2     |       | 0    | 1     |      | 1     |
| Taper Length (ft)   | 140   |       |      | 140   |       |      | 50    |       |      | 50    |      |       |
| Lane Util. Factor   | 0.97  | 0.95  | 0.95 | 0.97  | 0.95  | 0.95 | 0.97  | 0.95  | 0.95 | 1.00  | 0.95 | 1.00  |
| Ped Bike Factor     |       | 1.00  |      |       | 1.00  |      |       | 1.00  |      |       |      | 0.98  |
| Frt                 |       | 0.992 |      |       | 0.993 |      |       | 0.980 |      |       |      | 0.850 |
| Flt Protected       | 0.950 |       |      | 0.950 |       |      | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (prot)   | 3433  | 3506  | 0    | 3433  | 3511  | 0    | 3433  | 3458  | 0    | 1770  | 3539 | 1583  |
| Flt Permitted       | 0.950 |       |      | 0.950 |       |      | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (perm)   | 3433  | 3506  | 0    | 3433  | 3511  | 0    | 3433  | 3458  | 0    | 1770  | 3539 | 1557  |
| Right Turn on Red   |       |       | Yes  |       |       | Yes  |       |       | Yes  |       |      | Yes   |
| Satd. Flow (RTOR)   |       | 7     |      |       | 6     |      |       | 13    |      |       |      | 65    |
| Link Speed (mph)    |       | 35    |      |       | 35    |      |       | 35    |      |       | 35   |       |
| Link Distance (ft)  |       | 1357  |      |       | 1477  |      |       | 1463  |      |       | 1148 |       |
| Travel Time (s)     |       | 26.4  |      |       | 28.8  |      |       | 28.5  |      |       | 22.4 |       |

**Intersection Summary**  
Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
7: Beauregard St/S Walter Reed Dr & King St

AM PEAK  
10/22/2011

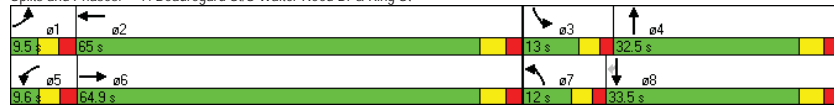


| Lane Group           | EBL   | EBT   | WBL  | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔    | ↕     | ↔     | ↕     | ↔     | ↕     | ↕     |
| Volume (vph)         | 85    | 1530  | 85   | 2320  | 280   | 670   | 175   | 410   | 225   |
| Turn Type            | Prot  | NA    | Prot | NA    | Prot  | NA    | Prot  | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5    | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases     |       |       |      |       |       |       |       |       | 8     |
| Detector Phase       | 1     | 6     | 5    | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |      |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 10.0  | 4.0  | 10.0  | 6.5   | 7.0   | 3.5   | 7.0   | 7.0   |
| Minimum Split (s)    | 9.5   | 30.5  | 9.5  | 30.5  | 12.0  | 29.5  | 9.0   | 29.5  | 29.5  |
| Total Split (s)      | 9.5   | 64.9  | 9.6  | 65.0  | 12.0  | 32.5  | 13.0  | 33.5  | 33.5  |
| Total Split (%)      | 7.9%  | 54.1% | 8.0% | 54.2% | 10.0% | 27.1% | 10.8% | 27.9% | 27.9% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0  | 4.0   | 3.0   | 3.5   | 3.0   | 3.5   | 3.5   |
| All-Red Time (s)     | 2.5   | 2.5   | 2.5  | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0  | 0.0   | -5.0  | -5.0  | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.5   | 6.5   | 5.5  | 6.5   | 0.0   | 0.5   | 5.0   | 5.5   | 5.5   |
| Lead/Lag             | Lead  | Lag   | Lead | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |      |       |       |       |       |       |       |
| Recall Mode          | None  | Max   | None | Max   | None  | C-Max | None  | C-Max | C-Max |
| Act Effct Green (s)  | 4.0   | 58.4  | 4.1  | 58.5  | 12.0  | 32.0  | 8.0   | 28.0  | 28.0  |
| Actuated g/C Ratio   | 0.03  | 0.49  | 0.03 | 0.49  | 0.10  | 0.27  | 0.07  | 0.23  | 0.23  |
| v/c Ratio            | 0.80  | 1.02  | 0.78 | 1.53  | 0.88  | 0.89  | 1.59  | 0.53  | 0.59  |
| Control Delay        | 100.4 | 57.5  | 96.6 | 268.2 | 79.2  | 54.4  | 339.1 | 43.1  | 36.0  |
| Queue Delay          | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 100.4 | 57.5  | 96.6 | 268.2 | 79.2  | 54.4  | 339.1 | 43.1  | 36.0  |
| LOS                  | F     | E     | F    | F     | E     | D     | F     | D     | D     |
| Approach Delay       |       | 59.6  |      | 262.4 |       | 61.0  |       | 105.0 |       |
| Approach LOS         |       | E     |      | F     |       | E     |       | F     |       |

Intersection Summary


Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 72 (60%), Referenced to phase 4:NBT and 8:SBT, Start of Yellow  
 Natural Cycle: 145  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.59  
 Intersection Signal Delay: 150.0  
 Intersection LOS: F  
 Intersection Capacity Utilization 112.4%  
 ICU Level of Service H  
 Analysis Period (min) 15

Splits and Phases: 7: Beauregard St/S Walter Reed Dr & King St



Updated 2035 Baseline with Recommended Improvements  
7: Beauregard St/S Walter Reed Dr & King St

AM PEAK  
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| Lane Group              | EBL  | EBT   | WBL  | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|-------------------------|------|-------|------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 1    | 6     | 5    | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases        |      |       |      |       |       |       |       |       | 8     |
| Minimum Initial (s)     | 4.0  | 10.0  | 4.0  | 10.0  | 6.5   | 7.0   | 3.5   | 7.0   | 7.0   |
| Minimum Split (s)       | 9.5  | 30.5  | 9.5  | 30.5  | 12.0  | 29.5  | 9.0   | 29.5  | 29.5  |
| Total Split (s)         | 9.5  | 64.9  | 9.6  | 65.0  | 12.0  | 32.5  | 13.0  | 33.5  | 33.5  |
| Total Split (%)         | 7.9% | 54.1% | 8.0% | 54.2% | 10.0% | 27.1% | 10.8% | 27.9% | 27.9% |
| Maximum Green (s)       | 4.0  | 58.4  | 4.1  | 58.5  | 7.0   | 27.0  | 8.0   | 28.0  | 28.0  |
| Yellow Time (s)         | 3.0  | 4.0   | 3.0  | 4.0   | 3.0   | 3.5   | 3.0   | 3.5   | 3.5   |
| All-Red Time (s)        | 2.5  | 2.5   | 2.5  | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead | Lag   | Lead | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?      |      |       |      |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0  | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0  | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | Max   | None | Max   | None  | C-Max | None  | C-Max | C-Max |
| Walk Time (s)           |      | 7.0   |      | 7.0   |       | 7.0   |       | 7.0   | 7.0   |
| Flash Dont Walk (s)     |      | 17.0  |      | 17.0  |       | 17.0  |       | 17.0  | 17.0  |
| Pedestrian Calls (#/hr) |      | 0     |      | 0     |       | 0     |       | 0     | 0     |
| 90th %ile Green (s)     | 4.0  | 58.4  | 4.1  | 58.5  | 7.0   | 27.0  | 8.0   | 28.0  | 28.0  |
| 90th %ile Term Code     | Max  | MaxR  | Max  | MaxR  | Max   | Coord | Max   | Coord | Coord |
| 70th %ile Green (s)     | 4.0  | 58.4  | 4.1  | 58.5  | 7.0   | 27.0  | 8.0   | 28.0  | 28.0  |
| 70th %ile Term Code     | Max  | MaxR  | Max  | MaxR  | Max   | Coord | Max   | Coord | Coord |
| 50th %ile Green (s)     | 4.0  | 58.4  | 4.1  | 58.5  | 7.0   | 27.0  | 8.0   | 28.0  | 28.0  |
| 50th %ile Term Code     | Max  | MaxR  | Max  | MaxR  | Max   | Coord | Max   | Coord | Coord |
| 30th %ile Green (s)     | 4.0  | 58.4  | 4.1  | 58.5  | 7.0   | 27.0  | 8.0   | 28.0  | 28.0  |
| 30th %ile Term Code     | Max  | MaxR  | Max  | MaxR  | Max   | Coord | Max   | Coord | Coord |
| 10th %ile Green (s)     | 4.0  | 58.4  | 4.1  | 58.5  | 7.0   | 27.0  | 8.0   | 28.0  | 28.0  |
| 10th %ile Term Code     | Max  | MaxR  | Max  | MaxR  | Max   | Coord | Max   | Coord | Coord |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 72 (60%), Referenced to phase 4:NBT and 8:SBT, Start of Yellow  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
9: Beauregard St & Braddock Rd

AM PEAK  
10/22/2011

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT  | WBR   | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|-------|------|-------|------|-------|-------|------|-------|-------|-------|------|
| Lane Configurations | ↔     | ↔     | ↔    | ↔     | ↔    | ↔     | ↔     | ↔    | ↔     | ↔     | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           |       | -6%   |      |       | -4%  |       |       | -2%  |       |       | 2%    |      |
| Storage Length (ft) | 100   |       | 0    | 200   |      | 60    | 80    |      | 100   | 250   |       | 0    |
| Storage Lanes       | 1     |       | 0    | 1     |      | 1     | 1     |      | 1     | 1     |       | 0    |
| Taper Length (ft)   | 50    |       |      | 50    |      |       | 50    |      |       | 50    |       |      |
| Lane Util. Factor   | 1.00  | 0.95  | 0.95 | 1.00  | 0.95 | 1.00  | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 0.95 |
| Ped Bike Factor     |       |       |      |       |      |       |       |      |       |       | 0.99  |      |
| Frt                 |       | 0.950 |      |       |      | 0.850 |       |      | 0.850 |       | 0.976 |      |
| Flt Protected       | 0.950 |       |      | 0.950 |      |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (prot)   | 1823  | 3463  | 0    | 1805  | 3610 | 1615  | 1787  | 3575 | 1599  | 1752  | 3401  | 0    |
| Flt Permitted       | 0.720 |       |      | 0.596 |      |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (perm)   | 1381  | 3463  | 0    | 1132  | 3610 | 1615  | 1787  | 3575 | 1599  | 1752  | 3401  | 0    |
| Right Turn on Red   |       |       | Yes  |       |      | Yes   |       | Yes  |       | Yes   |       | Yes  |
| Satd. Flow (RTOR)   |       | 11    |      |       |      | 624   |       |      | 215   |       | 32    |      |
| Link Speed (mph)    |       | 35    |      |       | 35   |       |       | 35   |       |       | 35    |      |
| Link Distance (ft)  |       | 755   |      |       | 1885 |       |       | 1146 |       |       | 1463  |      |
| Travel Time (s)     |       | 14.7  |      |       | 36.7 |       |       | 22.3 |       |       | 28.5  |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
9: Beauregard St & Braddock Rd

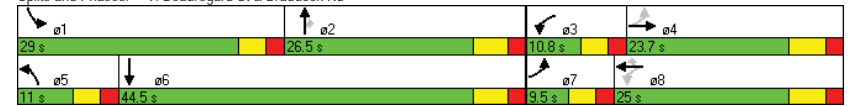
AM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 5     | 20    | 265   | 50    | 630   | 25    | 430   | 200   | 380   | 185   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 7     | 4     | 3     | 8     |       | 5     | 2     |       | 1     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 8     |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 7.0   | 4.0   | 4.0   | 4.0   | 6.0   | 10.0  | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)    | 9.5   | 22.5  | 9.5   | 22.0  | 22.0  | 11.0  | 26.0  | 26.0  | 11.0  | 26.0  |
| Total Split (s)      | 9.5   | 23.7  | 10.8  | 25.0  | 25.0  | 11.0  | 26.5  | 26.5  | 29.0  | 44.5  |
| Total Split (%)      | 10.6% | 26.3% | 12.0% | 27.8% | 27.8% | 12.2% | 29.4% | 29.4% | 32.2% | 49.4% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | -2.5  | 0.0   | -1.0  | -2.0  | 0.0   | -1.0  | -2.0  |
| Total Lost Time (s)  | 2.5   | 3.5   | 2.5   | 3.5   | 6.0   | 4.0   | 6.0   | 4.0   | 6.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       | C-Max | C-Max | None  | C-Max |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |
| Act Effct Green (s)  | 15.8  | 12.0  | 19.3  | 16.6  | 14.1  | 7.0   | 36.0  | 34.0  | 24.0  | 59.6  |
| Actuated g/C Ratio   | 0.18  | 0.13  | 0.21  | 0.18  | 0.16  | 0.08  | 0.40  | 0.38  | 0.27  | 0.66  |
| v/c Ratio            | 0.02  | 0.07  | 0.91  | 0.08  | 0.87  | 0.19  | 0.32  | 0.29  | 0.88  | 0.10  |
| Control Delay        | 21.8  | 23.9  | 65.3  | 27.9  | 17.5  | 42.4  | 21.9  | 5.2   | 52.6  | 7.6   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 21.8  | 23.9  | 65.3  | 27.9  | 17.5  | 42.4  | 21.9  | 5.2   | 52.6  | 7.6   |
| LOS                  | C     | C     | E     | C     | B     | D     | C     | A     | D     | A     |
| Approach Delay       |       | 23.7  |       | 31.5  |       |       | 17.6  |       |       | 36.1  |
| Approach LOS         |       | C     |       | C     |       |       | B     |       |       | D     |

Intersection Summary

Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.91  
 Intersection Signal Delay: 28.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 65.9%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 9: Beauregard St & Braddock Rd



Updated 2035 Baseline with Recommended Improvements  
9: Beaugard St & Braddock Rd

AM PEAK  
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| Lane Group              | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 7     | 4     | 3     | 8     |       | 5     | 2     |       | 1     | 6     |
| Permitted Phases        | 4     |       | 8     |       | 8     |       |       | 2     |       |       |
| Minimum Initial (s)     | 4.0   | 7.0   | 4.0   | 4.0   | 4.0   | 6.0   | 10.0  | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)       | 9.5   | 22.5  | 9.5   | 22.0  | 22.0  | 11.0  | 26.0  | 26.0  | 11.0  | 26.0  |
| Total Split (s)         | 9.5   | 23.7  | 10.8  | 25.0  | 25.0  | 11.0  | 26.5  | 26.5  | 29.0  | 44.5  |
| Total Split (%)         | 10.6% | 26.3% | 12.0% | 27.8% | 27.8% | 12.2% | 29.4% | 29.4% | 32.2% | 49.4% |
| Maximum Green (s)       | 4.5   | 17.7  | 5.8   | 19.0  | 19.0  | 6.0   | 20.5  | 20.5  | 24.0  | 38.5  |
| Yellow Time (s)         | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 0.2   | 0.2   | 3.0   | 0.2   |
| Minimum Gap (s)         | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 0.2   | 0.2   | 3.0   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |
| Walk Time (s)           | 4.0   |       | 5.0   | 5.0   |       | 7.0   | 7.0   |       | 7.0   |       |
| Flash Dont Walk (s)     | 12.0  |       | 11.0  | 11.0  |       | 13.0  | 13.0  |       | 13.0  |       |
| Pedestrian Calls (#/hr) | 5     |       | 0     | 0     |       | 5     | 5     |       | 5     |       |
| 90th %ile Green (s)     | 4.5   | 17.7  | 5.8   | 19.0  | 19.0  | 6.0   | 20.5  | 20.5  | 24.0  | 38.5  |
| 90th %ile Term Code     | Max   | Hold  | Max   | Max   | Max   | Max   | Coord | Coord | Max   | Coord |
| 70th %ile Green (s)     | 0.0   | 8.9   | 5.8   | 19.7  | 19.7  | 6.0   | 29.3  | 29.3  | 24.0  | 47.3  |
| 70th %ile Term Code     | Skip  | Hold  | Max   | Gap   | Gap   | Max   | Coord | Coord | Max   | Coord |
| 50th %ile Green (s)     | 0.0   | 7.0   | 5.8   | 17.8  | 17.8  | 0.0   | 31.2  | 31.2  | 24.0  | 60.2  |
| 50th %ile Term Code     | Skip  | Min   | Max   | Hold  | Hold  | Skip  | Coord | Coord | Max   | Coord |
| 30th %ile Green (s)     | 0.0   | 0.0   | 8.7   | 7.7   | 7.7   | 0.0   | 41.5  | 41.5  | 23.8  | 70.3  |
| 30th %ile Term Code     | Skip  | Skip  | Hold  | Gap   | Gap   | Skip  | Coord | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   | 7.5   | 6.5   | 6.5   | 0.0   | 47.4  | 47.4  | 19.1  | 71.5  |
| 10th %ile Term Code     | Skip  | Skip  | Hold  | Gap   | Gap   | Skip  | Coord | Coord | Gap   | Coord |

Intersection Summary

Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
10: Beaugard St & Fillmore Ave

AM PEAK  
10/22/2011

| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT  | SBR   |
|---------------------|------|-------|-------|------|-------|------|-------|-------|------|-------|------|-------|
| Lane Configurations |      |       |       |      |       |      |       |       |      |       |      |       |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12    | 12   | 12    |
| Grade (%)           |      | -3%   |       |      | -3%   |      |       | -4%   |      |       | 3%   |       |
| Storage Length (ft) | 0    |       | 150   | 0    |       | 0    | 200   |       | 0    | 75    |      | 0     |
| Storage Lanes       | 0    |       | 1     | 0    |       | 0    | 1     |       | 0    | 1     |      | 0     |
| Taper Length (ft)   | 50   |       |       | 50   |       |      | 50    |       |      | 50    |      |       |
| 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     |      |       | 0.98  |      | 1.00  |      |       | 1.00  |      |       |      | 1.00  |
| Frt                 |      |       | 0.850 |      | 0.975 |      |       | 0.989 |      |       |      | 0.988 |
| Flt Protected       |      | 0.963 |       |      | 0.964 |      | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (prot)   | 0    | 1821  | 1607  | 0    | 1771  | 0    | 1805  | 3564  | 0    | 1743  | 3433 | 0     |
| Flt Permitted       |      | 0.823 |       |      | 0.765 |      | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (perm)   | 0    | 1556  | 1571  | 0    | 1405  | 0    | 1805  | 3564  | 0    | 1743  | 3433 | 0     |
| Right Turn on Red   |      |       | Yes   |      |       | Yes  |       |       | Yes  |       |      | Yes   |
| Satd. Flow (RTOR)   |      |       | 97    |      | 10    |      |       | 10    |      |       |      | 10    |
| Link Speed (mph)    |      | 25    |       |      | 25    |      |       | 35    |      |       |      | 35    |
| Link Distance (ft)  |      | 778   |       |      | 309   |      |       | 1416  |      |       |      | 1146  |
| Travel Time (s)     |      | 21.2  |       |      | 8.4   |      |       | 27.6  |      |       |      | 22.3  |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
10: Beauregard St & Fillmore Ave

AM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       | ↖ ↗   | ↖ ↗   |       | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |
| Volume (vph)         | 15    | 5     | 90    | 60    | 5     | 50    | 625   | 15    | 410   |
| Turn Type            | Perm  | NA    | pm+ov | Perm  | NA    | Prot  | NA    | Prot  | NA    |
| Protected Phases     |       | 4     | 5     |       | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       |       | 4     |       |       |       |       |       |
| Detector Phase       | 4     | 4     | 5     | 4     | 4     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 14.0  | 14.0  | 6.0   | 14.0  | 14.0  | 6.0   | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)    | 33.0  | 33.0  | 11.0  | 33.0  | 33.0  | 11.0  | 16.0  | 11.0  | 16.0  |
| Total Split (s)      | 40.0  | 40.0  | 21.0  | 40.0  | 40.0  | 21.0  | 64.0  | 16.0  | 59.0  |
| Total Split (%)      | 33.3% | 33.3% | 17.5% | 33.3% | 33.3% | 17.5% | 53.3% | 13.3% | 49.2% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.0  | -2.0  | -1.0  | -2.0  | -2.0  | -1.0  | -2.0  | -1.0  | -2.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             |       |       | Lead  |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |       |
| Act Effct Green (s)  | 18.6  | 24.8  |       | 18.6  | 9.4   | 93.4  | 7.4   | 84.0  |       |
| Actuated g/C Ratio   | 0.16  | 0.21  |       | 0.16  | 0.08  | 0.78  | 0.06  | 0.70  |       |
| v/c Ratio            | 0.09  | 0.24  |       | 0.38  | 0.38  | 0.26  | 0.15  | 0.20  |       |
| Control Delay        | 41.9  | 6.8   |       | 43.9  | 76.3  | 4.5   | 56.3  | 8.1   |       |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Total Delay          | 41.9  | 6.8   |       | 43.9  | 76.3  | 4.5   | 56.3  | 8.1   |       |
| LOS                  | D     | A     |       | D     | E     | A     | E     | A     |       |
| Approach Delay       | 13.1  |       |       | 43.9  |       | 9.4   |       | 9.6   |       |
| Approach LOS         | B     |       |       | D     |       | A     |       | A     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 112 (93%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.38  
 Intersection Signal Delay: 11.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 48.1%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 10: Beauregard St & Fillmore Ave



Updated 2035 Baseline with Recommended Improvements  
10: Beauregard St & Fillmore Ave

AM PEAK  
10/22/2011

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 4     | 5     |       | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases        | 4     |       |       | 4     |       |       |       |       |       |
| Minimum Initial (s)     | 14.0  | 14.0  | 6.0   | 14.0  | 14.0  | 6.0   | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)       | 33.0  | 33.0  | 11.0  | 33.0  | 33.0  | 11.0  | 16.0  | 11.0  | 16.0  |
| Total Split (s)         | 40.0  | 40.0  | 21.0  | 40.0  | 40.0  | 21.0  | 64.0  | 16.0  | 59.0  |
| Total Split (%)         | 33.3% | 33.3% | 17.5% | 33.3% | 33.3% | 17.5% | 53.3% | 13.3% | 49.2% |
| Maximum Green (s)       | 34.0  | 34.0  | 16.0  | 34.0  | 34.0  | 16.0  | 58.0  | 11.0  | 53.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       | Lead  |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.2   | 2.0   | 0.2   |
| Minimum Gap (s)         | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.2   | 2.0   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Walk Time (s)           | 4.0   | 4.0   |       | 4.0   | 4.0   |       |       |       |       |
| Flash Dont Walk (s)     | 23.0  | 23.0  |       | 23.0  | 23.0  |       |       |       |       |
| Pedestrian Calls (#/hr) | 5     | 5     |       | 5     | 5     |       |       |       |       |
| 90th %ile Green (s)     | 27.0  | 27.0  | 11.5  | 27.0  | 27.0  | 11.5  | 68.5  | 7.5   | 64.5  |
| 90th %ile Term Code     | Ped   | Ped   | Gap   | Ped   | Ped   | Gap   | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 14.0  | 14.0  | 9.5   | 14.0  | 14.0  | 9.5   | 82.6  | 6.4   | 79.5  |
| 70th %ile Term Code     | Min   | Min   | Gap   | Min   | Min   | Gap   | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 14.0  | 14.0  | 8.1   | 14.0  | 14.0  | 8.1   | 94.0  | 0.0   | 80.9  |
| 50th %ile Term Code     | Min   | Min   | Gap   | Min   | Min   | Gap   | Coord | Skip  | Coord |
| 30th %ile Green (s)     | 14.0  | 14.0  | 6.7   | 14.0  | 14.0  | 6.7   | 94.0  | 0.0   | 82.3  |
| 30th %ile Term Code     | Min   | Min   | Gap   | Min   | Min   | Gap   | Coord | Skip  | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   | 6.0   | 0.0   | 0.0   | 6.0   | 114.0 | 0.0   | 103.0 |
| 10th %ile Term Code     | Skip  | Skip  | Min   | Skip  | Skip  | Min   | Coord | Skip  | Coord |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 112 (93%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
11: Mark Center Dr/Mark Center Dr/ Southern Towers & Seminary Rd

AM PEAK  
10/22/2011

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT  | WBR   | NBL   | NBT   | NBR   | SBL   | SBT  | SBR   |
|---------------------|-------|------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|
| Lane Configurations | ↔     | ↔↔↔  | ↔     | ↔     | ↔↔↔  | ↔     | ↔     | ↔     | ↔↔    | ↔↔    | ↔    | ↔     |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12    | 12    | 12   | 12    |
| Grade (%)           |       | 0%   |       |       | -1%  |       |       | 0%    |       |       | 0%   |       |
| Storage Length (ft) | 225   |      | 0     | 0     |      | 200   | 150   |       | 250   | 150   |      | 0     |
| Storage Lanes       | 1     |      | 1     | 1     |      | 1     | 1     |       | 1     | 2     |      | 1     |
| Taper Length (ft)   | 50    |      |       | 50    |      |       | 50    |       |       | 50    |      |       |
| Lane Util. Factor   | 1.00  | 0.91 | 1.00  | 1.00  | 0.91 | 1.00  | 1.00  | 0.91  | 0.91  | 0.97  | 1.00 | 1.00  |
| Ped Bike Factor     |       |      |       |       |      |       |       | 0.99  | 0.99  |       |      | 0.99  |
| Frt                 |       |      | 0.850 |       |      | 0.850 |       | 0.881 | 0.850 |       |      | 0.850 |
| Flt Protected       | 0.950 |      |       | 0.950 |      |       | 0.950 |       |       | 0.950 |      |       |
| Satd. Flow (prot)   | 1770  | 5085 | 1583  | 1778  | 5111 | 1591  | 1770  | 1478  | 2882  | 3433  | 1863 | 1583  |
| Flt Permitted       | 0.950 |      |       | 0.950 |      |       | 0.950 |       |       | 0.950 |      |       |
| Satd. Flow (perm)   | 1770  | 5085 | 1583  | 1778  | 5111 | 1591  | 1770  | 1478  | 2844  | 3433  | 1863 | 1563  |
| Right Turn on Red   |       |      | Yes   |       |      | Yes   |       |       | Yes   |       |      | Yes   |
| Satd. Flow (RTOR)   |       |      | 189   |       |      | 47    |       |       | 61    | 88    |      | 54    |
| Link Speed (mph)    |       | 35   |       |       | 35   |       |       |       | 25    |       |      | 25    |
| Link Distance (ft)  |       | 737  |       |       | 358  |       |       |       | 831   |       |      | 642   |
| Travel Time (s)     |       | 14.4 |       |       | 7.0  |       |       |       | 22.7  |       |      | 17.5  |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
11: Mark Center Dr/Mark Center Dr/ Southern Towers & Seminary Rd

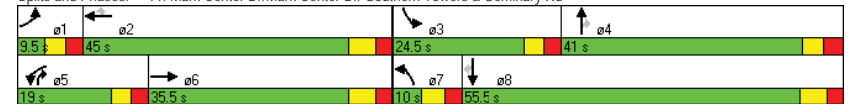
AM PEAK  
10/22/2011

| Lane Group           | EBL  | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔    | ↔↔↔   | ↔     | ↔     | ↔↔↔   | ↔     | ↔    | ↔     | ↔↔    | ↔↔    | ↔     | ↔     |
| Volume (vph)         | 20   | 1355  | 285   | 490   | 2095  | 90    | 30   | 15    | 195   | 235   | 75    | 50    |
| Turn Type            | Prot | NA    | Free  | Prot  | NA    | Perm  | Prot | NA    | pm+ov | Prot  | NA    | Perm  |
| Protected Phases     | 1    | 6     |       | 5     | 2     |       | 7    | 4     | 5     | 3     | 8     |       |
| Permitted Phases     |      |       | Free  |       |       | 2     |      | 4     | 4     |       |       | 8     |
| Detector Phase       | 1    | 6     |       | 5     | 2     | 2     | 7    | 4     | 5     | 3     | 8     | 8     |
| Switch Phase         |      |       |       |       |       |       |      |       |       |       |       |       |
| Minimum Initial (s)  | 4.0  | 10.0  |       | 4.0   | 10.0  | 10.0  | 4.0  | 7.0   | 4.0   | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)    | 9.5  | 32.5  |       | 9.5   | 32.5  | 32.5  | 10.0 | 41.0  | 9.5   | 24.5  | 20.5  | 20.5  |
| Total Split (s)      | 9.5  | 35.5  | 0.0   | 19.0  | 45.0  | 45.0  | 10.0 | 41.0  | 19.0  | 24.5  | 55.5  | 55.5  |
| Total Split (%)      | 7.9% | 29.6% | 0.0%  | 15.8% | 37.5% | 37.5% | 8.3% | 34.2% | 15.8% | 20.4% | 46.3% | 46.3% |
| Yellow Time (s)      | 3.0  | 4.0   |       | 3.0   | 4.0   | 4.0   | 3.0  | 3.0   | 3.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 2.5  | 2.5   |       | 2.5   | 2.5   | 2.5   | 2.5  | 3.0   | 2.5   | 2.5   | 2.5   | 2.5   |
| Lost Time Adjust (s) | -1.5 | -2.5  | 0.0   | -1.5  | -2.5  | 0.0   | -2.0 | -2.0  | -1.5  | -1.5  | -1.5  | -1.5  |
| Total Lost Time (s)  | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 6.5   | 4.0  | 4.0   | 4.0   | 4.0   | 5.0   | 5.0   |
| Lead/Lag             | Lead | Lag   |       | Lead  | Lag   | Lag   | Lead | Lag   | Lead  | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   |      |       |       |       |       |       |      |       |       |       |       |       |
| Recall Mode          | None | C-Max |       | None  | C-Max | C-Max | None | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 5.5  | 66.7  | 120.0 | 15.0  | 80.0  | 77.5  | 6.0  | 10.0  | 23.2  | 14.9  | 19.5  | 19.5  |
| Actuated g/C Ratio   | 0.05 | 0.56  | 1.00  | 0.12  | 0.67  | 0.65  | 0.05 | 0.08  | 0.19  | 0.12  | 0.16  | 0.16  |
| v/c Ratio            | 0.27 | 0.52  | 0.19  | 2.37  | 0.66  | 0.09  | 0.36 | 0.43  | 0.24  | 0.59  | 0.27  | 0.18  |
| Control Delay        | 53.8 | 19.7  | 0.2   | 655.9 | 15.3  | 6.7   | 66.7 | 25.2  | 16.4  | 55.3  | 45.3  | 12.2  |
| Queue Delay          | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 53.8 | 19.7  | 0.2   | 655.9 | 15.3  | 6.7   | 66.7 | 25.2  | 16.4  | 55.3  | 45.3  | 12.2  |
| LOS                  | D    | B     | A     | F     | B     | A     | E    | C     | B     | E     | D     | B     |
| Approach Delay       |      | 16.8  |       |       | 132.4 |       |      | 25.3  |       |       | 47.2  |       |
| Approach LOS         |      | B     |       |       | F     |       |      | C     |       |       | D     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 4 (3%), Referenced to phase 2:WBT and 6:EBT, Start of Green  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.37  
 Intersection Signal Delay: 82.1  
 Intersection LOS: F  
 Intersection Capacity Utilization 77.5%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 11: Mark Center Dr/Mark Center Dr/ Southern Towers & Seminary Rd



Updated 2035 Baseline with Recommended Improvements  
 11: Mark Center Dr/Mark Center Dr/ Southern Towers & Seminary Rd

AM PEAK  
 10/22/2011

| Lane Group              | EBL  | EBT   | EBR  | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|------|-------|------|-------|-------|-------|------|-------|-------|-------|-------|-------|
| Protected Phases        | 1    | 6     |      | 5     | 2     |       | 7    | 4     | 5     | 3     | 8     |       |
| Permitted Phases        |      |       | Free |       |       | 2     |      | 4     | 4     |       |       | 8     |
| Minimum Initial (s)     | 4.0  | 10.0  |      | 4.0   | 10.0  | 10.0  | 4.0  | 7.0   | 4.0   | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 9.5  | 32.5  |      | 9.5   | 32.5  | 32.5  | 10.0 | 41.0  | 9.5   | 24.5  | 20.5  | 20.5  |
| Total Split (s)         | 9.5  | 35.5  | 0.0  | 19.0  | 45.0  | 45.0  | 10.0 | 41.0  | 19.0  | 24.5  | 55.5  | 55.5  |
| Total Split (%)         | 7.9% | 29.6% | 0.0% | 15.8% | 37.5% | 37.5% | 8.3% | 34.2% | 15.8% | 20.4% | 46.3% | 46.3% |
| Maximum Green (s)       | 4.0  | 29.0  |      | 13.5  | 38.5  | 38.5  | 4.0  | 35.0  | 13.5  | 19.0  | 49.0  | 49.0  |
| Yellow Time (s)         | 3.0  | 4.0   |      | 3.0   | 4.0   | 4.0   | 3.5  | 3.0   | 3.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 2.5  | 2.5   |      | 2.5   | 2.5   | 2.5   | 2.5  | 3.0   | 2.5   | 2.5   | 2.5   | 2.5   |
| Lead/Lag                | Lead | Lag   |      | Lead  | Lag   | Lag   | Lead | Lag   | Lead  | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?      |      |       |      |       |       |       |      |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0  | 0.2   |      | 2.0   | 0.2   | 0.2   | 3.0  | 2.0   | 2.0   | 2.0   | 0.2   | 0.2   |
| Minimum Gap (s)         | 2.0  | 0.2   |      | 2.0   | 0.2   | 0.2   | 3.0  | 2.0   | 2.0   | 2.0   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0  | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | C-Max |      | None  | C-Max | C-Max | None | None  | None  | None  | None  | None  |
| Walk Time (s)           |      | 7.0   |      |       | 7.0   | 7.0   |      | 7.0   |       |       |       |       |
| Flash Dont Walk (s)     |      | 19.0  |      |       | 19.0  | 19.0  |      | 28.0  |       |       |       |       |
| Pedestrian Calls (#/hr) |      | 0     |      |       | 0     | 0     |      | 0     |       |       |       |       |
| 90th %ile Green (s)     | 4.0  | 54.8  |      | 13.5  | 64.3  | 64.3  | 4.0  | 11.1  | 13.5  | 17.1  | 23.2  | 23.2  |
| 90th %ile Term Code     | Max  | Coord |      | Max   | Coord | Coord | Max  | Gap   | Max   | Gap   | Hold  | Hold  |
| 70th %ile Green (s)     | 4.0  | 60.1  |      | 13.5  | 69.6  | 69.6  | 4.0  | 8.0   | 13.5  | 14.9  | 17.9  | 17.9  |
| 70th %ile Term Code     | Max  | Coord |      | Max   | Coord | Coord | Max  | Gap   | Max   | Gap   | Hold  | Hold  |
| 50th %ile Green (s)     | 4.0  | 62.7  |      | 13.5  | 72.2  | 72.2  | 4.0  | 7.0   | 13.5  | 13.3  | 15.3  | 15.3  |
| 50th %ile Term Code     | Max  | Coord |      | Max   | Coord | Coord | Max  | Min   | Max   | Gap   | Hold  | Hold  |
| 30th %ile Green (s)     | 0.0  | 64.3  |      | 13.5  | 83.3  | 83.3  | 0.0  | 7.0   | 13.5  | 11.7  | 23.7  | 23.7  |
| 30th %ile Term Code     | Skip | Coord |      | Max   | Coord | Coord | Skip | Min   | Max   | Gap   | Hold  | Hold  |
| 10th %ile Green (s)     | 0.0  | 79.0  |      | 13.5  | 98.0  | 98.0  | 0.0  | 0.0   | 13.5  | 10.0  | 0.0   | 0.0   |
| 10th %ile Term Code     | Skip | Coord |      | Max   | Coord | Coord | Skip | Skip  | Max   | Min   | Skip  | Skip  |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 4 (3%), Referenced to phase 2:WBT and 6:EBT, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
 12: Beauregard St & Seminary Rd

AM PEAK  
 10/22/2011

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT  | WBR   | NBL   | NBT  | NBR   | SBL   | SBT   | SBR   |
|---------------------|-------|-------|------|-------|------|-------|-------|------|-------|-------|-------|-------|
| Lane Configurations | ↔     | ↔↔    | ↔    | ↔↔    | ↔↔   | ↔     | ↔     | ↔↔   | ↔     | ↔     | ↔     | ↔     |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12    |
| Grade (%)           |       | -1%   |      |       | -1%  |       |       | 0%   |       |       |       | 2%    |
| Storage Length (ft) | 150   |       | 300  | 250   |      | 0     | 200   |      | 245   | 170   |       | 0     |
| Storage Lanes       | 1     |       | 1    | 2     |      | 1     | 1     |      | 1     | 2     |       | 1     |
| Taper Length (ft)   | 50    |       |      | 50    |      |       | 50    |      |       | 50    |       |       |
| Lane Util. Factor   | 1.00  | 0.91  | 0.91 | 0.94  | 0.95 | 1.00  | 0.97  | 0.95 | 1.00  | 0.97  | 0.95  | 0.95  |
| Ped Bike Factor     |       | 1.00  |      |       |      | 0.98  |       |      | 0.99  |       | 0.99  | 1.00  |
| Frt                 |       | 0.969 |      |       |      | 0.850 |       |      | 0.850 |       | 0.850 | 0.981 |
| Flt Protected       | 0.950 |       |      | 0.950 |      |       | 0.950 |      |       | 0.950 |       |       |
| Satd. Flow (prot)   | 1778  | 4939  | 0    | 5015  | 3557 | 1591  | 3433  | 3539 | 1583  | 3399  | 3430  | 0     |
| Flt Permitted       | 0.950 |       |      | 0.950 |      |       | 0.950 |      |       | 0.950 |       |       |
| Satd. Flow (perm)   | 1778  | 4939  | 0    | 5015  | 3557 | 1555  | 3433  | 3539 | 1560  | 3399  | 3430  | 0     |
| Right Turn on Red   |       |       | Yes  |       |      | Yes   |       |      | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)   |       | 56    |      |       |      | 125   |       |      | 282   |       | 13    |       |
| Link Speed (mph)    |       | 35    |      |       | 35   |       |       | 35   |       |       | 35    |       |
| Link Distance (ft)  |       | 1256  |      |       | 737  |       |       | 824  |       |       | 1416  |       |
| Travel Time (s)     |       | 24.5  |      |       | 14.4 |       |       | 16.1 |       |       | 27.6  |       |


Intersection Summary

Area Type: Other



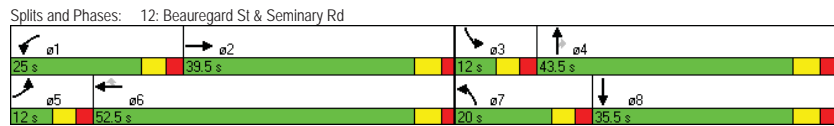
Updated 2035 Baseline with Recommended Improvements  
12: Beauregard St & Seminary Rd

AM PEAK  
10/22/2011




| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔↔    | ↔↔    | ↔     | ↔↔    | ↔↔    | ↔     | ↔↔    | ↔↔    |
| Volume (vph)         | 50    | 1050  | 840   | 1190  | 145   | 435   | 535   | 485   | 125   | 380   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     |       | 7     | 4     |       | 3     | 8     |
| Permitted Phases     |       |       |       |       | 6     |       |       | 4     |       |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 6     | 7     | 4     | 4     | 3     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 6.0   | 10.0  | 6.0   | 10.0  | 10.0  | 6.0   | 7.0   | 7.0   | 6.0   | 7.0   |
| Minimum Split (s)    | 12.0  | 35.0  | 12.0  | 35.0  | 35.0  | 12.0  | 35.5  | 35.5  | 12.0  | 35.5  |
| Total Split (s)      | 12.0  | 39.5  | 25.0  | 52.5  | 52.5  | 20.0  | 43.5  | 43.5  | 12.0  | 35.5  |
| Total Split (%)      | 10.0% | 32.9% | 20.8% | 43.8% | 43.8% | 16.7% | 36.3% | 36.3% | 10.0% | 29.6% |
| Yellow Time (s)      | 3.5   | 4.0   | 3.5   | 4.0   | 4.0   | 3.5   | 4.0   | 4.0   | 3.5   | 4.0   |
| All-Red Time (s)     | 2.5   | 2.0   | 2.5   | 2.0   | 2.0   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   |
| Lost Time Adjust (s) | -2.0  | -2.0  | -2.0  | -2.0  | 0.0   | -2.0  | -2.5  | 0.0   | -2.0  | -5.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 6.0   | 4.0   | 6.5   | 4.0   | 1.5   |       |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Max | None  | C-Max | C-Max | None  | Min   | Min   | None  | Min   |
| Act Effct Green (s)  | 8.0   | 42.6  | 21.0  | 58.0  | 56.0  | 16.0  | 32.4  | 29.9  | 8.0   | 26.9  |
| Actuated g/C Ratio   | 0.07  | 0.36  | 0.18  | 0.48  | 0.47  | 0.13  | 0.27  | 0.25  | 0.07  | 0.22  |
| v/c Ratio            | 0.45  | 0.80  | 1.03  | 0.74  | 0.20  | 1.02  | 0.60  | 0.87  | 0.59  | 0.60  |
| Control Delay        | 68.6  | 34.4  | 89.3  | 16.8  | 1.7   | 91.4  | 16.4  | 30.5  | 62.0  | 42.0  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 68.6  | 34.4  | 89.3  | 16.8  | 1.7   | 91.4  | 16.4  | 30.5  | 62.0  | 42.0  |
| LOS                  | E     | C     | F     | B     | A     | F     | B     | C     | E     | D     |
| Approach Delay       |       | 35.6  |       | 43.8  |       |       | 43.5  |       |       | 46.5  |
| Approach LOS         |       | D     |       | D     |       |       | D     |       |       | D     |

**Intersection Summary**  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection  
 Natural Cycle: 105  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.03  
 Intersection Signal Delay: 42.0  
 Intersection LOS: D  
 Intersection Capacity Utilization 82.0%  
 ICU Level of Service D  
 Analysis Period (min) 15



Updated 2035 Baseline with Recommended Improvements  
12: Beauregard St & Seminary Rd

AM PEAK  
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| Lane Group              | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 5     | 2     | 1     | 6     |       | 7     | 4     |       | 3     | 8     |
| Permitted Phases        |       |       |       |       | 6     |       |       | 4     |       |       |
| Minimum Initial (s)     | 6.0   | 10.0  | 6.0   | 10.0  | 10.0  | 6.0   | 7.0   | 7.0   | 6.0   | 7.0   |
| Minimum Split (s)       | 12.0  | 35.0  | 12.0  | 35.0  | 35.0  | 12.0  | 35.5  | 35.5  | 12.0  | 35.5  |
| Total Split (s)         | 12.0  | 39.5  | 25.0  | 52.5  | 52.5  | 20.0  | 43.5  | 43.5  | 12.0  | 35.5  |
| Total Split (%)         | 10.0% | 32.9% | 20.8% | 43.8% | 43.8% | 16.7% | 36.3% | 36.3% | 10.0% | 29.6% |
| Maximum Green (s)       | 6.0   | 33.5  | 19.0  | 46.5  | 46.5  | 14.0  | 37.0  | 37.0  | 6.0   | 29.0  |
| Yellow Time (s)         | 3.5   | 4.0   | 3.5   | 4.0   | 4.0   | 3.5   | 4.0   | 4.0   | 3.5   | 4.0   |
| All-Red Time (s)        | 2.5   | 2.0   | 2.5   | 2.0   | 2.0   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 1.0   | 0.2   | 2.0   | 0.2   | 0.2   | 1.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Minimum Gap (s)         | 1.0   | 0.2   | 2.0   | 0.2   | 0.2   | 1.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | C-Max | None  | C-Max | C-Max | None  | Min   | Min   | None  | Min   |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     | 22.0  | 22.0  | 22.0  | 22.0  | 22.0  | 22.0  | 22.0  | 22.0  | 22.0  | 22.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     |
| 90th %ile Green (s)     | 6.0   | 33.5  | 19.0  | 46.5  | 46.5  | 14.0  | 37.0  | 37.0  | 6.0   | 29.0  |
| 90th %ile Term Code     | Max   | Coord | Max   | Coord | Coord | Max   | Max   | Max   | Max   | Hold  |
| 70th %ile Green (s)     | 6.0   | 35.9  | 19.0  | 48.9  | 48.9  | 14.0  | 34.6  | 34.6  | 6.0   | 26.6  |
| 70th %ile Term Code     | Max   | Coord | Max   | Coord | Coord | Max   | Gap   | Gap   | Max   | Hold  |
| 50th %ile Green (s)     | 6.0   | 42.1  | 19.0  | 55.1  | 55.1  | 14.0  | 28.4  | 28.4  | 6.0   | 20.4  |
| 50th %ile Term Code     | Max   | Coord | Max   | Coord | Coord | Max   | Hold  | Hold  | Max   | Gap   |
| 30th %ile Green (s)     | 6.0   | 44.3  | 19.0  | 57.3  | 57.3  | 14.0  | 26.2  | 26.2  | 6.0   | 18.2  |
| 30th %ile Term Code     | Max   | Coord | Max   | Coord | Coord | Max   | Hold  | Hold  | Max   | Gap   |
| 10th %ile Green (s)     | 0.0   | 47.4  | 19.0  | 72.4  | 72.4  | 14.0  | 23.1  | 23.1  | 6.0   | 15.1  |
| 10th %ile Term Code     | Skip  | Coord | Max   | Coord | Coord | Max   | Hold  | Hold  | Max   | Gap   |

**Intersection Summary**  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
13: Echols Ave & Seminary Rd

AM PEAK  
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| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT   | SBR  |
|---------------------|-------|-------|------|-------|------|------|------|-------|------|------|-------|------|
| Lane Configurations | ↔     | ↕     | ↔    | ↔     | ↕    | ↔    | ↔    | ↕     | ↔    | ↔    | ↕     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12   | 12   | 12   | 12    | 12   | 12   | 12    | 12   |
| Grade (%)           |       | -1%   |      |       | 1%   |      |      | 0%    |      |      |       | 0%   |
| Storage Length (ft) | 75    |       | 0    | 150   |      | 0    | 0    |       | 0    | 0    |       | 0    |
| Storage Lanes       | 1     |       | 0    | 1     |      | 0    | 0    |       | 0    | 0    |       | 0    |
| Taper Length (ft)   | 50    |       |      | 50    |      |      | 50   |       | 50   |      |       | 50   |
| 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 |
| Ped Bike Factor     |       | 1.00  |      |       |      |      |      |       |      |      | 0.99  |      |
| Frt                 |       | 0.999 |      |       |      |      |      | 0.884 |      |      | 0.932 |      |
| Flt Protected       | 0.950 |       |      | 0.950 |      |      |      | 0.993 |      |      | 0.976 |      |
| Satd. Flow (prot)   | 1778  | 3553  | 0    | 1761  | 3522 | 0    | 0    | 1635  | 0    | 0    | 1680  | 0    |
| Flt Permitted       | 0.092 |       |      | 0.128 |      |      |      | 0.993 |      |      | 0.976 |      |
| Satd. Flow (perm)   | 172   | 3553  | 0    | 237   | 3522 | 0    | 0    | 1635  | 0    | 0    | 1680  | 0    |
| Right Turn on Red   |       |       | Yes  |       |      | Yes  |      |       | Yes  |      |       | Yes  |
| Satd. Flow (RTOR)   |       |       |      |       |      |      |      | 97    |      |      | 5     |      |
| Link Speed (mph)    |       | 35    |      |       | 35   |      |      | 25    |      |      | 25    |      |
| Link Distance (ft)  |       | 1011  |      |       | 1256 |      |      | 653   |      |      | 530   |      |
| Travel Time (s)     |       | 19.7  |      |       | 24.5 |      |      | 17.8  |      |      | 14.5  |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
13: Echols Ave & Seminary Rd

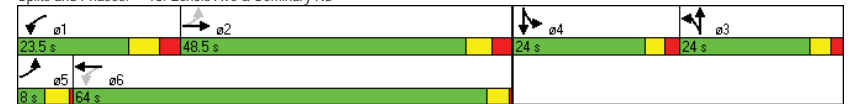
AM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBT   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↕     | ↕     |
| Volume (vph)         | 5     | 1275  | 30    | 1640  | 0     | 0     |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | NA    | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     | 3     | 4     |
| Permitted Phases     | 2     |       | 6     |       |       |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 3     | 4     |
| Switch Phase         |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 6.0   | 10.0  | 4.0   | 7.0   | 7.0   |
| Minimum Split (s)    | 8.0   | 13.0  | 23.5  | 20.0  | 24.0  | 24.0  |
| Total Split (s)      | 8.0   | 48.5  | 23.5  | 64.0  | 24.0  | 24.0  |
| Total Split (%)      | 6.7%  | 40.4% | 19.6% | 53.3% | 20.0% | 20.0% |
| Yellow Time (s)      | 3.5   | 4.0   | 4.5   | 3.5   | 3.0   | 3.0   |
| All-Red Time (s)     | 0.5   | 3.0   | 3.0   | 0.5   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -3.5  | -3.5  | -3.0  | -3.5  | -1.0  | -1.0  |
| Total Lost Time (s)  | 0.5   | 3.5   | 4.5   | 0.5   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  |
| Lead-Lag Optimize?   |       |       |       |       |       |       |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | None  |
| Act Effct Green (s)  | 91.1  | 83.6  | 93.1  | 95.5  | 11.2  | 10.4  |
| Actuated g/C Ratio   | 0.76  | 0.70  | 0.78  | 0.80  | 0.09  | 0.09  |
| v/c Ratio            | 0.02  | 0.56  | 0.09  | 0.63  | 0.47  | 0.07  |
| Control Delay        | 4.0   | 7.8   | 9.7   | 9.5   | 19.3  | 35.4  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 4.0   | 7.8   | 9.7   | 9.5   | 19.3  | 35.4  |
| LOS                  | A     | A     | A     | A     | B     | D     |
| Approach Delay       |       | 7.8   |       | 9.5   | 19.3  | 35.4  |
| Approach LOS         |       | A     |       | A     | B     | D     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 115  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.63  
 Intersection Signal Delay: 9.2  
 Intersection Capacity Utilization 58.9%  
 Analysis Period (min) 15  
 Intersection LOS: A  
 ICU Level of Service B

Split and Phases: 13: Echols Ave & Seminary Rd



Updated 2035 Baseline with Recommended Improvements  
13: Echols Ave & Seminary Rd

AM PEAK  
10/22/2011

| Lane Group              | EBL  | EBT   | WBL   | WBT   | NBT   | SBT   |
|-------------------------|------|-------|-------|-------|-------|-------|
| Protected Phases        | 5    | 2     | 1     | 6     | 3     | 4     |
| Permitted Phases        | 2    |       | 6     |       |       |       |
| Minimum Initial (s)     | 4.0  | 6.0   | 10.0  | 4.0   | 7.0   | 7.0   |
| Minimum Split (s)       | 8.0  | 13.0  | 23.5  | 20.0  | 24.0  | 24.0  |
| Total Split (s)         | 8.0  | 48.5  | 23.5  | 64.0  | 24.0  | 24.0  |
| Total Split (%)         | 6.7% | 40.4% | 19.6% | 53.3% | 20.0% | 20.0% |
| Maximum Green (s)       | 4.0  | 41.5  | 16.0  | 60.0  | 19.0  | 19.0  |
| Yellow Time (s)         | 3.5  | 4.0   | 4.5   | 3.5   | 3.0   | 3.0   |
| All-Red Time (s)        | 0.5  | 3.0   | 3.0   | 0.5   | 2.0   | 2.0   |
| Lead/Lag                | Lead | Lag   | Lead  | Lag   | Lag   | Lead  |
| Lead-Lag Optimize?      |      |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0  | 2.0   | 0.2   | 3.0   | 4.0   | 2.0   |
| Minimum Gap (s)         | 3.0  | 2.0   | 0.2   | 3.0   | 4.0   | 2.0   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | C-Min | None  | C-Min | None  | None  |
| Walk Time (s)           |      |       |       |       | 4.0   | 4.0   |
| Flash Dont Walk (s)     |      |       |       |       | 15.0  | 15.0  |
| Pedestrian Calls (#/hr) |      |       |       |       | 5     | 5     |
| 90th %ile Green (s)     | 4.0  | 47.5  | 10.0  | 60.0  | 19.0  | 19.0  |
| 90th %ile Term Code     | Max  | Coord | Min   | Coord | Ped   | Ped   |
| 70th %ile Green (s)     | 0.0  | 68.4  | 10.0  | 88.9  | 10.1  | 7.0   |
| 70th %ile Term Code     | Skip | Coord | Min   | Coord | Gap   | Min   |
| 50th %ile Green (s)     | 0.0  | 82.7  | 10.0  | 103.2 | 7.8   | 0.0   |
| 50th %ile Term Code     | Skip | Coord | Min   | Coord | Gap   | Skip  |
| 30th %ile Green (s)     | 0.0  | 101.0 | 0.0   | 104.0 | 7.0   | 0.0   |
| 30th %ile Term Code     | Skip | Coord | Skip  | Coord | Min   | Skip  |
| 10th %ile Green (s)     | 0.0  | 101.0 | 0.0   | 104.0 | 7.0   | 0.0   |
| 10th %ile Term Code     | Skip | Coord | Skip  | Coord | Min   | Skip  |

Intersection Summary

Cycle Length: 120  
Actuated Cycle Length: 120  
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
14: Dawes Ave & Seminary Rd

AM PEAK  
10/22/2011

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL  | NBT   | NBR  | SBL  | SBT   | SBR   |
|---------------------|-------|-------|------|-------|-------|------|------|-------|------|------|-------|-------|
| Lane Configurations |       |       |      |       |       |      |      |       |      |      |       |       |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900  |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12    |
| Grade (%)           |       | 0%    |      |       | 0%    |      |      | 0%    |      |      | 0%    |       |
| Storage Length (ft) | 240   |       | 0    | 55    |       | 0    | 0    |       | 0    | 0    |       | 0     |
| Storage Lanes       | 1     |       | 0    | 1     |       | 0    | 0    |       | 0    | 0    |       | 1     |
| Taper Length (ft)   | 50    |       |      | 50    |       |      | 50   |       | 50   |      |       | 50    |
| 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  |
| Ped Bike Factor     |       | 1.00  |      |       | 1.00  |      |      | 0.99  |      |      | 1.00  | 0.97  |
| Frt                 |       | 0.999 |      |       | 0.997 |      |      | 0.920 |      |      |       | 0.850 |
| Flt Protected       | 0.950 |       |      | 0.950 |       |      |      | 0.990 |      |      |       | 0.976 |
| Satd. Flow (prot)   | 1770  | 3535  | 0    | 1770  | 3527  | 0    | 0    | 1676  | 0    | 0    | 1818  | 1583  |
| Flt Permitted       | 0.100 |       |      | 0.174 |       |      |      | 0.938 |      |      | 0.878 |       |
| Satd. Flow (perm)   | 186   | 3535  | 0    | 324   | 3527  | 0    | 0    | 1588  | 0    | 0    | 1632  | 1532  |
| Right Turn on Red   |       |       | Yes  |       |       | Yes  |      |       | Yes  |      |       | Yes   |
| Satd. Flow (RTOR)   |       | 1     |      |       | 4     |      |      | 32    |      |      |       | 16    |
| Link Speed (mph)    |       | 35    |      |       | 35    |      |      | 25    |      |      |       | 25    |
| Link Distance (ft)  |       | 248   |      |       | 1011  |      |      | 734   |      |      |       | 1285  |
| Travel Time (s)     |       | 4.8   |      |       | 19.7  |      |      | 20.0  |      |      |       | 35.0  |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
14: Dawes Ave & Seminary Rd

AM PEAK  
10/22/2011

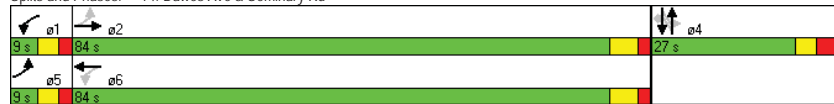


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |
| Volume (vph)         | 25    | 1245  | 35    | 1590  | 10    | 10    | 5     | 5     | 15    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | NA    | Perm  |
| Protected Phases     | 5     | 2     | 1     | 6     |       | 4     |       | 4     |       |
| Permitted Phases     | 2     |       | 6     |       | 4     |       | 4     |       | 4     |
| Detector Phase       | 5     | 2     | 1     | 6     | 4     | 4     | 4     | 4     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 10.0  | 4.0   | 10.0  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)    | 9.0   | 30.0  | 9.0   | 16.0  | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  |
| Total Split (s)      | 9.0   | 84.0  | 9.0   | 84.0  | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  |
| Total Split (%)      | 7.5%  | 70.0% | 7.5%  | 70.0% | 22.5% | 22.5% | 22.5% | 22.5% | 22.5% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | -1.0  | -2.0  | -1.0  | -2.0  | -2.0  | -2.0  | -2.0  | -2.0  | -2.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 99.8  | 97.6  | 99.8  | 97.6  | 12.6  |       | 12.6  | 12.6  |       |
| Actuated g/C Ratio   | 0.83  | 0.81  | 0.83  | 0.81  | 0.10  |       | 0.10  | 0.10  |       |
| v/c Ratio            | 0.12  | 0.47  | 0.12  | 0.61  | 0.28  |       | 0.06  | 0.09  |       |
| Control Delay        | 2.6   | 4.1   | 2.0   | 4.6   | 27.4  |       | 45.9  | 19.8  |       |
| Queue Delay          | 0.0   | 0.2   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Total Delay          | 2.6   | 4.3   | 2.0   | 4.6   | 27.4  |       | 45.9  | 19.8  |       |
| LOS                  | A     | A     | A     | A     | C     |       | D     | B     |       |
| Approach Delay       |       | 4.3   |       | 4.6   | 27.4  |       | 29.8  |       |       |
| Approach LOS         |       | A     |       | A     | C     |       | C     |       |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 103 (86%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.61  
 Intersection Signal Delay: 5.0  
 Intersection LOS: A  
 Intersection Capacity Utilization 73.6%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 14: Dawes Ave & Seminary Rd



Updated 2035 Baseline with Recommended Improvements  
14: Dawes Ave & Seminary Rd

AM PEAK  
10/22/2011



| Lane Group              | EBL  | EBT   | WBL  | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|-------------------------|------|-------|------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 5    | 2     | 1    | 6     |       | 4     |       | 4     |       |
| Permitted Phases        | 2    |       | 6    |       | 4     |       | 4     |       | 4     |
| Minimum Initial (s)     | 4.0  | 10.0  | 4.0  | 10.0  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)       | 9.0  | 30.0  | 9.0  | 16.0  | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  |
| Total Split (s)         | 9.0  | 84.0  | 9.0  | 84.0  | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  |
| Total Split (%)         | 7.5% | 70.0% | 7.5% | 70.0% | 22.5% | 22.5% | 22.5% | 22.5% | 22.5% |
| Maximum Green (s)       | 4.0  | 78.0  | 4.0  | 78.0  | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  |
| Yellow Time (s)         | 3.0  | 4.0   | 3.0  | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0  | 2.0   | 2.0  | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead | Lag   | Lead | Lag   |       |       |       |       |       |
| Lead-Lag Optimize?      |      |       |      |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0  | 0.2   | 2.0  | 0.2   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Minimum Gap (s)         | 2.0  | 0.2   | 2.0  | 0.2   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | C-Max | None | C-Max | None  | None  | None  | None  | None  |
| Walk Time (s)           | 4.0  |       |      |       | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Flash Dont Walk (s)     |      | 20.0  |      |       | 17.0  | 17.0  | 17.0  | 17.0  | 17.0  |
| Pedestrian Calls (#/hr) |      | 5     |      |       | 5     | 5     | 5     | 5     | 5     |
| 90th %ile Green (s)     | 4.0  | 78.0  | 4.0  | 78.0  | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  |
| 90th %ile Term Code     | Max  | Coord | Max  | Coord | Ped   | Ped   | Ped   | Ped   | Ped   |
| 70th %ile Green (s)     | 4.0  | 91.0  | 4.0  | 91.0  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| 70th %ile Term Code     | Max  | Coord | Max  | Coord | Min   | Min   | Min   | Min   | Min   |
| 50th %ile Green (s)     | 4.0  | 91.0  | 4.0  | 91.0  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| 50th %ile Term Code     | Max  | Coord | Max  | Coord | Min   | Min   | Min   | Min   | Min   |
| 30th %ile Green (s)     | 0.0  | 100.0 | 0.0  | 100.0 | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| 30th %ile Term Code     | Skip | Coord | Skip | Coord | Min   | Min   | Min   | Min   | Min   |
| 10th %ile Green (s)     | 0.0  | 114.0 | 0.0  | 114.0 | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 10th %ile Term Code     | Skip | Coord | Skip | Coord | Skip  | Skip  | Skip  | Skip  | Skip  |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 103 (86%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
15: Beauregard St & Mark Center Dr

AM PEAK  
10/22/2011

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT  | WBR  | NBL   | NBT   | NBR  | SBL   | SBT  | SBR  |
|---------------------|-------|------|------|-------|------|------|-------|-------|------|-------|------|------|
| Lane Configurations | ↔     | ↔    | ↔    | ↔     | ↔    | ↔    | ↔     | ↔     | ↔    | ↔     | ↔    | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12    | 12   | 12    | 12   | 12   |
| Grade (%)           | 0%    |      | 0%   |       | 0%   |      | 0%    |       | 0%   |       | 0%   |      |
| Storage Length (ft) | 200   |      | 0    | 150   |      | 200  | 190   |       | 200  | 0     |      | 0    |
| Storage Lanes       | 1     |      | 0    | 1     |      | 1    |       |       | 1    | 1     |      | 0    |
| Taper Length (ft)   | 50    |      |      | 50    |      |      | 50    |       |      | 50    |      |      |
| Lane Util. Factor   | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 0.91  | 1.00 | 0.97  | 0.95 | 0.95 |
| Ped Bike Factor     |       |      |      |       |      |      | 0.99  |       |      |       | 1.00 |      |
| Frt                 | 0.925 |      |      |       |      |      | 0.850 | 0.850 |      | 0.979 |      |      |
| Flt Protected       | 0.950 |      |      | 0.950 |      |      | 0.950 |       |      | 0.950 |      |      |
| Satd. Flow (prot)   | 1770  | 1723 | 0    | 1770  | 1863 | 1583 | 1770  | 5085  | 1583 | 3433  | 3449 | 0    |
| Flt Permitted       | 0.754 |      |      | 0.751 |      |      | 0.950 |       |      | 0.950 |      |      |
| Satd. Flow (perm)   | 1405  | 1723 | 0    | 1399  | 1863 | 1562 | 1770  | 5085  | 1583 | 3433  | 3449 | 0    |
| Right Turn on Red   |       |      | Yes  |       |      | Yes  |       |       | Yes  |       |      | Yes  |
| Satd. Flow (RTOR)   | 5     |      |      |       | 22   |      | 272   |       |      | 27    |      |      |
| Link Speed (mph)    | 25    |      |      |       | 25   |      | 35    |       |      | 35    |      |      |
| Link Distance (ft)  | 355   |      |      |       | 910  |      | 780   |       |      | 824   |      |      |
| Travel Time (s)     | 9.7   |      |      |       | 24.8 |      | 15.2  |       |      | 16.1  |      |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
15: Beauregard St & Mark Center Dr

AM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |     |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |     |
| Volume (vph)         | 10    | 5     | 35    | 5     | 20    | 45    | 1425  | 355   | 890   | 520   |     |
| Turn Type            | Perm  | NA    | Perm  | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    |     |
| Protected Phases     | 4     |       | 4     |       | 4     |       | 5     |       | 2     |       |     |
| Permitted Phases     | 4     |       | 4     |       | 4     |       | 5     |       | 2     |       |     |
| Detector Phase       | 4     |       | 4     |       | 4     |       | 5     |       | 2     |       |     |
| Switch Phase         | 4     |       | 4     |       | 4     |       | 5     |       | 2     |       |     |
| Minimum Initial (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 4.0   | 10.0  | 10.0  | 4.0   | 10.0  |     |
| Minimum Split (s)    | 33.0  | 33.0  | 33.0  | 33.0  | 33.0  | 9.0   | 24.0  | 24.0  | 9.0   | 24.0  |     |
| Total Split (s)      | 33.0  | 33.0  | 33.0  | 33.0  | 33.0  | 12.0  | 45.0  | 45.0  | 42.0  | 75.0  |     |
| Total Split (%)      | 27.5% | 27.5% | 27.5% | 27.5% | 27.5% | 10.0% | 37.5% | 37.5% | 35.0% | 62.5% |     |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |     |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |     |
| Lost Time Adjust (s) | -2.0  | -2.0  | -2.0  | -2.0  | 0.0   | -1.0  | -2.0  | 0.0   | -1.0  | -2.0  |     |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 6.0   | 4.0   | 6.0   | 4.0   | 4.0   | 4.0   |     |
| Lead/Lag             |       |       |       |       |       |       | Lead  | Lag   | Lag   | Lead  | Lag |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |     |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |     |
| Act Effct Green (s)  | 13.6  | 13.6  | 13.6  | 13.6  | 11.6  | 7.4   | 60.5  | 58.5  | 36.5  | 92.3  |     |
| Actuated g/C Ratio   | 0.11  | 0.11  | 0.11  | 0.11  | 0.10  | 0.06  | 0.50  | 0.49  | 0.30  | 0.77  |     |
| v/c Ratio            | 0.07  | 0.05  | 0.24  | 0.02  | 0.13  | 0.44  | 0.60  | 0.42  | 0.92  | 0.24  |     |
| Control Delay        | 43.6  | 31.1  | 49.0  | 41.6  | 17.2  | 55.3  | 19.5  | 6.9   | 29.8  | 7.3   |     |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |     |
| Total Delay          | 43.6  | 31.1  | 49.0  | 41.6  | 17.2  | 55.3  | 19.5  | 6.9   | 29.8  | 7.3   |     |
| LOS                  | D     | C     | D     | D     | B     | E     | B     | A     | C     | A     |     |
| Approach Delay       | 37.7  |       | 37.7  |       | 17.9  |       | 20.7  |       |       |       |     |
| Approach LOS         | D     |       | D     |       | B     |       | C     |       |       |       |     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 30 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.92  
 Intersection Signal Delay: 19.6  
 Intersection LOS: B  
 Intersection Capacity Utilization 72.0%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 15: Beauregard St & Mark Center Dr



Updated 2035 Baseline with Recommended Improvements  
 15: Beauregard St & Mark Center Dr

AM PEAK  
 10/22/2011

| Lane Group              | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 4     |       | 4     |       | 5     | 2     |       | 1     | 6     |
| Permitted Phases        | 4     |       | 4     |       | 4     |       |       | 2     |       |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 4.0   | 10.0  | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)       | 33.0  | 33.0  | 33.0  | 33.0  | 33.0  | 9.0   | 24.0  | 24.0  | 9.0   | 24.0  |
| Total Split (s)         | 33.0  | 33.0  | 33.0  | 33.0  | 33.0  | 12.0  | 45.0  | 45.0  | 42.0  | 75.0  |
| Total Split (%)         | 27.5% | 27.5% | 27.5% | 27.5% | 27.5% | 10.0% | 37.5% | 37.5% | 35.0% | 62.5% |
| Maximum Green (s)       | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  | 7.0   | 39.0  | 39.0  | 37.0  | 69.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       |       | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.2   | 0.2   | 0.2   | 2.0   | 0.2   |
| Minimum Gap (s)         | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.2   | 0.2   | 0.2   | 2.0   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max | C-Max |
| Walk Time (s)           | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 6.0   | 6.0   |       | 6.0   | 6.0   |
| Flash Dont Walk (s)     | 19.0  | 19.0  | 19.0  | 19.0  | 19.0  |       | 12.0  | 12.0  |       | 12.0  |
| Pedestrian Calls (#/hr) | 5     | 5     | 5     | 5     | 5     |       | 5     | 5     |       | 5     |
| 90th %ile Green (s)     | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  | 7.0   | 39.0  | 39.0  | 37.0  | 69.0  |
| 90th %ile Term Code     | Ped   | Ped   | Ped   | Ped   | Ped   | Max   | Coord | Coord | Max   | Coord |
| 70th %ile Green (s)     | 9.2   | 9.2   | 9.2   | 9.2   | 9.2   | 7.0   | 56.8  | 56.8  | 37.0  | 86.8  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Max   | Coord | Coord | Max   | Coord |
| 50th %ile Green (s)     | 7.7   | 7.7   | 7.7   | 7.7   | 7.7   | 7.0   | 58.3  | 58.3  | 37.0  | 88.3  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Max   | Coord | Coord | Max   | Coord |
| 30th %ile Green (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 6.4   | 60.7  | 60.7  | 35.3  | 89.6  |
| 30th %ile Term Code     | Min   | Min   | Min   | Min   | Min   | Gap   | Coord | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 77.8  | 77.8  | 31.2  | 114.0 |
| 10th %ile Term Code     | Skip  | Skip  | Skip  | Skip  | Skip  | Skip  | Coord | Coord | Gap   | Coord |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 30 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
 16: Beauregard St & Clyde's Restaurant/Highview Ln

AM PEAK  
 10/22/2011

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|---------------------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations |       |       |      |       |       |      |       |       |      |       |       |      |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           |       | 0%    |      |       |       | 0%   |       | 0%    |      |       |       | -1%  |
| Storage Length (ft) | 0     |       | 150  | 115   |       | 0    | 185   |       | 0    | 185   |       | 0    |
| Storage Lanes       | 1     |       | 1    | 1     |       | 0    | 1     |       | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50    |       |      | 50    |       |      | 50    |       |      | 50    |       |      |
| 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     | 0.99  |       |      |       | 0.98  |      |       | 1.00  |      |       | 1.00  |      |
| Frt                 |       | 0.867 |      |       | 0.873 |      |       | 0.994 |      |       | 0.989 |      |
| Flt Protected       | 0.950 |       |      | 0.950 |       |      | 0.950 |       |      | 0.950 |       |      |
| Satd. Flow (prot)   | 1770  | 1596  | 0    | 1770  | 1600  | 0    | 1770  | 3513  | 0    | 1778  | 3508  | 0    |
| Flt Permitted       | 0.736 |       |      | 0.729 |       |      | 0.440 |       |      | 0.065 |       |      |
| Satd. Flow (perm)   | 1371  | 1596  | 0    | 1358  | 1600  | 0    | 820   | 3513  | 0    | 122   | 3508  | 0    |
| Right Turn on Red   |       |       | Yes  |       |       | Yes  |       |       | Yes  |       |       | Yes  |
| Satd. Flow (RTOR)   |       | 38    |      |       | 27    |      |       | 6     |      |       | 13    |      |
| Link Speed (mph)    |       | 25    |      |       | 25    |      |       | 35    |      |       | 35    |      |
| Link Distance (ft)  |       | 521   |      |       | 422   |      |       | 719   |      |       | 780   |      |
| Travel Time (s)     |       | 14.2  |      |       | 11.5  |      |       | 14.0  |      |       | 15.2  |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
16: Beauregard St & Clyde's Restaurant/Highview Ln

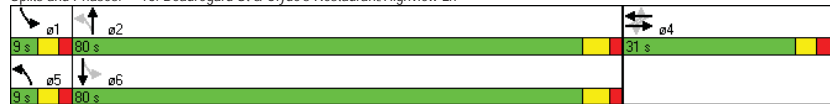
AM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |
| Volume (vph)         | 70    | 5     | 5     | 5     | 10    | 1730  | 35    | 485   |
| 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   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 31.0  | 31.0  | 31.0  | 31.0  | 9.0   | 31.0  | 9.0   | 31.0  |
| Total Split (s)      | 31.0  | 31.0  | 31.0  | 31.0  | 9.0   | 80.0  | 9.0   | 80.0  |
| Total Split (%)      | 25.8% | 25.8% | 25.8% | 25.8% | 7.5%  | 66.7% | 7.5%  | 66.7% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  | 12.0  | 12.0  | 12.0  | 12.0  | 96.3  | 93.0  | 98.8  | 97.6  |
| Actuated g/C Ratio   | 0.10  | 0.10  | 0.10  | 0.10  | 0.80  | 0.78  | 0.82  | 0.81  |
| v/c Ratio            | 0.55  | 0.22  | 0.04  | 0.17  | 0.02  | 0.71  | 0.21  | 0.20  |
| Control Delay        | 65.3  | 19.6  | 46.4  | 21.6  | 1.5   | 3.8   | 14.6  | 1.2   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 65.3  | 19.6  | 46.4  | 21.6  | 1.5   | 3.8   | 14.6  | 1.2   |
| LOS                  | E     | B     | D     | C     | A     | A     | B     | A     |
| Approach Delay       |       | 48.6  |       | 24.9  |       | 3.8   |       | 2.0   |
| Approach LOS         |       | D     |       | C     |       | A     |       | A     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 8 (7%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.71  
 Intersection Signal Delay: 5.6  
 Intersection LOS: A  
 Intersection Capacity Utilization 71.0%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 16: Beauregard St & Clyde's Restaurant/Highview Ln



Updated 2035 Baseline with Recommended Improvements  
16: Beauregard St & Clyde's Restaurant/Highview Ln

AM PEAK  
10/22/2011

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL  | NBT   | SBL  | SBT   |
|-------------------------|-------|-------|-------|-------|------|-------|------|-------|
| Protected Phases        |       | 4     |       | 4     | 5    | 2     | 1    | 6     |
| Permitted Phases        | 4     |       | 4     |       | 2    |       | 6    |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 4.0  | 10.0  | 4.0  | 10.0  |
| Minimum Split (s)       | 31.0  | 31.0  | 31.0  | 31.0  | 9.0  | 31.0  | 9.0  | 31.0  |
| Total Split (s)         | 31.0  | 31.0  | 31.0  | 31.0  | 9.0  | 80.0  | 9.0  | 80.0  |
| Total Split (%)         | 25.8% | 25.8% | 25.8% | 25.8% | 7.5% | 66.7% | 7.5% | 66.7% |
| Maximum Green (s)       | 25.0  | 25.0  | 25.0  | 25.0  | 4.0  | 74.0  | 4.0  | 74.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 2.0  | 2.0   | 2.0  | 2.0   |
| Lead/Lag                |       |       |       |       | Lead | Lag   | Lead | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |      |       |      |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0  | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0  | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None | C-Max | None | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   |      | 7.0   |      | 7.0   |
| Flash Dont Walk (s)     | 18.0  | 18.0  | 18.0  | 18.0  |      | 18.0  |      | 18.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     |      | 0     |      | 0     |
| 90th %ile Green (s)     | 17.2  | 17.2  | 17.2  | 17.2  | 6.0  | 79.0  | 6.8  | 79.8  |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap  | Coord | Gap  | Coord |
| 70th %ile Green (s)     | 14.1  | 14.1  | 14.1  | 14.1  | 0.0  | 82.6  | 6.3  | 93.9  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Skip | Coord | Gap  | Coord |
| 50th %ile Green (s)     | 11.9  | 11.9  | 11.9  | 11.9  | 0.0  | 85.1  | 6.0  | 96.1  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Skip | Coord | Gap  | Coord |
| 30th %ile Green (s)     | 9.7   | 9.7   | 9.7   | 9.7   | 0.0  | 98.3  | 0.0  | 98.3  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Skip | Coord | Skip | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 114.0 | 0.0  | 114.0 |
| 10th %ile Term Code     | Skip  | Skip  | Skip  | Skip  | Skip | Coord | Skip | Coord |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 8 (7%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
 18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent AM PEAK  
 10/22/2011

| Lane Group          | EBL   | EBT   | EBR   | WBL  | WBT   | WBR   | NBL   | NBT   | NBR  | SBL   | SBT  | SBR   |
|---------------------|-------|-------|-------|------|-------|-------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↔     | ↔     | ↔     | ↔    | ↔     | ↔     | ↔     | ↔     | ↔    | ↔     | ↔    | ↔     |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12    | 12   | 12    | 12    | 12    | 12    | 12   | 12    | 12   | 12    |
| Grade (%)           |       | 0%    |       |      | 0%    |       |       | 0%    |      |       | 0%   |       |
| Storage Length (ft) | 235   |       | 0     | 0    |       | 20    | 235   |       | 0    | 150   |      | 170   |
| Storage Lanes       | 1     |       | 1     | 0    |       | 1     | 1     |       | 0    | 1     |      | 1     |
| Taper Length (ft)   | 50    |       |       | 50   |       |       | 50    |       |      | 50    |      |       |
| Lane Util. Factor   | 0.95  | 0.95  | 1.00  | 1.00 | 1.00  | 1.00  | 0.97  | 0.95  | 0.95 | 1.00  | 0.95 | 1.00  |
| Ped Bike Factor     |       |       |       |      |       |       | 0.97  |       |      |       |      | 0.98  |
| Frt                 |       |       | 0.850 |      |       | 0.850 |       | 0.999 |      |       |      | 0.850 |
| Flt Protected       | 0.950 | 0.955 |       |      | 0.968 |       | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (prot)   | 1681  | 1690  | 1583  | 0    | 1803  | 1583  | 3433  | 3536  | 0    | 1770  | 3539 | 1417  |
| Flt Permitted       | 0.950 | 0.955 |       |      | 0.968 |       | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (perm)   | 1681  | 1690  | 1583  | 0    | 1803  | 1542  | 3433  | 3536  | 0    | 1770  | 3539 | 1383  |
| Right Turn on Red   |       |       | Yes   |      | Yes   |       | Yes   |       | Yes  |       | Yes  |       |
| Satd. Flow (RTOR)   |       |       | 796   |      | 16    |       |       |       |      |       |      | 113   |
| Link Speed (mph)    |       | 35    |       |      | 15    |       |       | 35    |      |       | 35   |       |
| Link Distance (ft)  |       | 1573  |       |      | 252   |       |       | 414   |      |       | 921  |       |
| Travel Time (s)     |       | 30.6  |       |      | 11.5  |       |       | 8.1   |      |       | 17.9 |       |

Intersection Summary

Area Type: Other

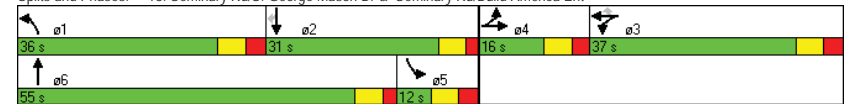
Updated 2035 Baseline with Recommended Improvements  
 18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent AM PEAK  
 10/22/2011

| Lane Group           | EBL   | EBT   | EBR   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 150   | 5     | 740   | 10    | 15    | 665   | 935   | 20    | 525   | 105   |
| Turn Type            | Split | NA    | Free  | NA    | Perm  | Prot  | NA    | Prot  | NA    | Perm  |
| Protected Phases     | 4     | 4     |       | 3     |       | 1     | 6     | 5     | 2     |       |
| Permitted Phases     |       |       | Free  |       | 3     |       |       |       |       | 2     |
| Detector Phase       | 4     | 4     |       | 3     | 3     | 1     | 6     | 5     | 2     | 2     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0   |       | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 11.5  | 11.5  |       | 37.0  | 37.0  | 12.0  | 11.0  | 12.0  | 24.0  | 24.0  |
| Total Split (s)      | 16.0  | 16.0  | 0.0   | 37.0  | 37.0  | 36.0  | 55.0  | 12.0  | 31.0  | 31.0  |
| Total Split (%)      | 13.3% | 13.3% | 0.0%  | 30.8% | 30.8% | 30.0% | 45.8% | 10.0% | 25.8% | 25.8% |
| Yellow Time (s)      | 4.0   | 4.0   |       | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 2.5   | 2.5   |       | 3.0   | 3.0   | 3.0   | 2.0   | 3.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | -3.0  | -3.0  | -3.0  | -2.0  | -3.0  | -2.0  | -2.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 1.5   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lead  |       | Lag   | Lag   | Lead  | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  |       | None  | None  | Min   | C-Min | None  | C-Max | C-Max |
| Act Effct Green (s)  | 11.5  | 11.5  | 120.0 | 14.8  | 14.8  | 30.6  | 79.2  | 11.0  | 52.4  | 52.4  |
| Actuated g/C Ratio   | 0.10  | 0.10  | 1.00  | 0.12  | 0.12  | 0.26  | 0.66  | 0.09  | 0.44  | 0.44  |
| v/c Ratio            | 0.51  | 0.52  | 0.50  | 0.15  | 0.08  | 0.82  | 0.43  | 0.14  | 0.37  | 0.17  |
| Control Delay        | 63.1  | 63.4  | 1.1   | 44.4  | 16.9  | 41.0  | 19.4  | 51.3  | 27.3  | 6.8   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 63.1  | 63.4  | 1.1   | 44.4  | 16.9  | 41.0  | 19.4  | 51.3  | 27.3  | 6.8   |
| LOS                  | E     | E     | A     | D     | B     | D     | B     | D     | C     | A     |
| Approach Delay       |       | 11.9  |       | 35.4  |       |       | 28.3  |       | 24.8  |       |
| Approach LOS         |       | B     |       | D     |       |       | C     |       | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 117 (98%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow  
 Natural Cycle: 95  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay: 23.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 57.8%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent





Updated 2035 Baseline with Recommended Improvements  
 18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent

AM PEAK  
 10/22/2011

| Lane Group              | EBL   | EBT   | EBR  | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 4     | 4     |      | 3     |       | 1     | 6     | 5     | 2     |       |
| Permitted Phases        |       |       | Free |       | 3     |       |       |       |       | 2     |
| Minimum Initial (s)     | 5.0   | 5.0   |      | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)       | 11.5  | 11.5  |      | 37.0  | 37.0  | 12.0  | 11.0  | 12.0  | 24.0  | 24.0  |
| Total Split (s)         | 16.0  | 16.0  | 0.0  | 37.0  | 37.0  | 36.0  | 55.0  | 12.0  | 31.0  | 31.0  |
| Total Split (%)         | 13.3% | 13.3% | 0.0% | 30.8% | 30.8% | 30.0% | 45.8% | 10.0% | 25.8% | 25.8% |
| Maximum Green (s)       | 9.5   | 9.5   |      | 30.0  | 30.0  | 29.0  | 49.0  | 5.0   | 25.0  | 25.0  |
| Yellow Time (s)         | 4.0   | 4.0   |      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 2.5   | 2.5   |      | 3.0   | 3.0   | 3.0   | 2.0   | 3.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead  | Lead  |      | Lag   | Lag   | Lead  | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      |       |       |      |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   |      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   |      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  |      | None  | None  | Min   | C-Min | None  | C-Max | C-Max |
| Walk Time (s)           | 7.0   | 7.0   |      | 7.0   | 7.0   |       |       | 7.0   | 7.0   |       |
| Flash Dont Walk (s)     |       |       |      | 23.0  | 23.0  |       |       | 11.0  | 11.0  |       |
| Pedestrian Calls (#/hr) |       |       |      | 5     | 5     |       |       | 0     | 0     |       |
| 90th %ile Green (s)     | 9.5   | 9.5   |      | 30.0  | 30.0  | 29.0  | 48.5  | 5.5   | 25.0  | 25.0  |
| 90th %ile Term Code     | Max   | Max   |      | Ped   | Ped   | Max   | Coord | Hold  | Coord | Coord |
| 70th %ile Green (s)     | 9.5   | 9.5   |      | 8.9   | 8.9   | 29.0  | 55.8  | 19.3  | 46.1  | 46.1  |
| 70th %ile Term Code     | Max   | Max   |      | Gap   | Gap   | Max   | Coord | Hold  | Coord | Coord |
| 50th %ile Green (s)     | 9.5   | 9.5   |      | 7.8   | 7.8   | 29.0  | 83.2  | 0.0   | 47.2  | 47.2  |
| 50th %ile Term Code     | Max   | Max   |      | Gap   | Gap   | Max   | Coord | Skip  | Coord | Coord |
| 30th %ile Green (s)     | 9.5   | 9.5   |      | 0.0   | 0.0   | 27.4  | 98.0  | 0.0   | 63.6  | 63.6  |
| 30th %ile Term Code     | Max   | Max   |      | Skip  | Skip  | Gap   | Coord | Skip  | Coord | Coord |
| 10th %ile Green (s)     | 6.9   | 6.9   |      | 0.0   | 0.0   | 23.7  | 100.6 | 0.0   | 69.9  | 69.9  |
| 10th %ile Term Code     | Gap   | Gap   |      | Skip  | Skip  | Gap   | Coord | Skip  | Coord | Coord |

**Intersection Summary**  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 117 (98%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
 20: Hampton Dr & Braddock Rd


AM PEAK  
 10/22/2011

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL  | NBT   | NBR   | SBL  | SBT   | SBR   |
|---------------------|-------|-------|------|-------|-------|------|------|-------|-------|------|-------|-------|
| Lane Configurations |       |       |      |       |       |      |      |       |       |      |       |       |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   | 12   | 12    | 12    | 12   | 12    | 12    |
| Grade (%)           |       | 0%    |      |       | 0%    |      |      | 0%    |       |      | 0%    |       |
| Storage Length (ft) | 170   |       | 0    | 125   |       | 0    | 0    |       | 0     | 0    |       | 0     |
| Storage Lanes       | 1     |       | 0    | 1     |       | 0    | 0    |       | 1     | 0    |       | 1     |
| Taper Length (ft)   | 50    |       |      | 50    |       |      | 50   |       |       | 50   |       |       |
| 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  |
| Ped Bike Factor     |       | 1.00  |      |       | 1.00  |      |      |       |       |      |       | 0.99  |
| Frt                 |       | 0.997 |      |       | 0.960 |      |      |       | 0.850 |      |       | 0.850 |
| Flt Protected       | 0.950 |       |      | 0.950 |       |      |      | 0.979 |       |      |       | 0.955 |
| Satd. Flow (prot)   | 1770  | 3528  | 0    | 1770  | 3386  | 0    | 0    | 1824  | 1583  | 0    | 1779  | 1583  |
| Flt Permitted       | 0.193 |       |      | 0.442 |       |      |      | 0.823 |       |      | 0.552 |       |
| Satd. Flow (perm)   | 360   | 3528  | 0    | 823   | 3386  | 0    | 0    | 1533  | 1583  | 0    | 1028  | 1560  |
| Right Turn on Red   |       |       | Yes  |       |       | Yes  |      |       | Yes   |      |       | Yes   |
| Satd. Flow (RTOR)   |       | 3     |      |       | 71    |      |      |       | 54    |      |       | 118   |
| Link Speed (mph)    |       | 35    |      |       | 35    |      |      | 25    |       |      |       | 25    |
| Link Distance (ft)  |       | 1885  |      |       | 1164  |      |      | 416   |       |      |       | 1404  |
| Travel Time (s)     |       | 36.7  |      |       | 22.7  |      |      | 11.3  |       |      |       | 38.3  |

**Intersection Summary**  
 Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
20: Hampton Dr & Braddock Rd

AM PEAK  
10/22/2011



| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |
| Volume (vph)         | 90    | 510   | 30    | 805   | 50    | 70    | 50    | 80    | 5     | 110   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | Perm  | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     |       | 3     |       |       | 3     |       |
| Permitted Phases     | 6     |       | 2     |       | 3     |       | 3     | 3     |       | 3     |
| Detector Phase       | 1     | 6     | 5     | 2     | 3     | 3     | 3     | 3     | 3     | 3     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 9.0   | 16.5  | 9.0   | 16.5  | 12.0  | 12.0  | 12.0  | 12.0  | 12.0  | 12.0  |
| Total Split (s)      | 15.0  | 81.0  | 9.0   | 75.0  | 30.0  | 30.0  | 30.0  | 30.0  | 30.0  | 30.0  |
| Total Split (%)      | 12.5% | 67.5% | 7.5%  | 62.5% | 25.0% | 25.0% | 25.0% | 25.0% | 25.0% | 25.0% |
| Yellow Time (s)      | 3.0   | 3.5   | 3.0   | 3.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| 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)  | 5.0   | 6.5   | 5.0   | 6.5   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 92.3  | 86.7  | 88.3  | 81.8  |       | 14.6  | 14.6  |       | 14.6  | 14.6  |
| Actuated g/C Ratio   | 0.77  | 0.72  | 0.74  | 0.68  |       | 0.12  | 0.12  |       | 0.12  | 0.12  |
| v/c Ratio            | 0.28  | 0.22  | 0.05  | 0.51  |       | 0.69  | 0.22  |       | 0.73  | 0.40  |
| Control Delay        | 5.6   | 6.8   | 5.5   | 13.3  |       | 68.4  | 13.7  |       | 80.4  | 11.9  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |
| Total Delay          | 5.6   | 6.8   | 5.5   | 13.3  |       | 68.4  | 13.7  |       | 80.4  | 11.9  |
| LOS                  | A     | A     | A     | B     |       | E     | B     |       | F     | B     |
| Approach Delay       |       | 6.6   |       | 13.1  |       | 52.3  |       |       | 41.7  |       |
| Approach LOS         |       | A     |       | B     |       | D     |       |       | D     |       |

Intersection Summary


Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 118 (98%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.73  
 Intersection Signal Delay: 17.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 64.2%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 20: Hampton Dr & Braddock Rd



Updated 2035 Baseline with Recommended Improvements  
20: Hampton Dr & Braddock Rd

AM PEAK  
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| Lane Group              | EBL   | EBT   | WBL  | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 1     | 6     | 5    | 2     |       | 3     |       |       | 3     |       |
| Permitted Phases        | 6     |       | 2    |       | 3     |       | 3     | 3     |       | 3     |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 9.0   | 16.5  | 9.0  | 16.5  | 12.0  | 12.0  | 12.0  | 12.0  | 12.0  | 12.0  |
| Total Split (s)         | 15.0  | 81.0  | 9.0  | 75.0  | 30.0  | 30.0  | 30.0  | 30.0  | 30.0  | 30.0  |
| Total Split (%)         | 12.5% | 67.5% | 7.5% | 62.5% | 25.0% | 25.0% | 25.0% | 25.0% | 25.0% | 25.0% |
| Maximum Green (s)       | 10.0  | 74.5  | 4.0  | 68.5  | 24.0  | 24.0  | 24.0  | 24.0  | 24.0  | 24.0  |
| Yellow Time (s)         | 3.0   | 3.5   | 3.0  | 3.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0   | 3.0   | 2.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   | Lead | Lag   |       |       |       |       |       |       |
| Lead-Lag Optimize?      |       |       |      |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 4.0   | 2.0  | 4.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | C-Max | None | C-Max | None  | None  | None  | None  | None  | None  |
| Walk Time (s)           |       |       |      |       | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |       |      |       | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  |
| Pedestrian Calls (#/hr) |       |       |      |       | 0     | 0     | 0     | 0     | 0     | 0     |
| 90th %ile Green (s)     | 7.8   | 74.9  | 5.8  | 72.9  | 21.8  | 21.8  | 21.8  | 21.8  | 21.8  | 21.8  |
| 90th %ile Term Code     | Gap   | Coord | Gap  | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |
| 70th %ile Green (s)     | 6.6   | 80.4  | 5.2  | 79.0  | 16.9  | 16.9  | 16.9  | 16.9  | 16.9  | 16.9  |
| 70th %ile Term Code     | Gap   | Coord | Gap  | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |
| 50th %ile Green (s)     | 5.9   | 83.2  | 4.9  | 82.2  | 14.4  | 14.4  | 14.4  | 14.4  | 14.4  | 14.4  |
| 50th %ile Term Code     | Gap   | Coord | Gap  | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |
| 30th %ile Green (s)     | 5.4   | 95.7  | 0.0  | 85.3  | 11.8  | 11.8  | 11.8  | 11.8  | 11.8  | 11.8  |
| 30th %ile Term Code     | Gap   | Coord | Skip | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |
| 10th %ile Green (s)     | 4.8   | 99.3  | 0.0  | 89.5  | 8.2   | 8.2   | 8.2   | 8.2   | 8.2   | 8.2   |
| 10th %ile Term Code     | Gap   | Coord | Skip | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 118 (98%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
23: Library Ln & Seminary Rd

AM PEAK  
10/22/2011

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL  | NBT   | NBR  | SBL   | SBT   | SBR  |
|---------------------|-------|------|-------|-------|-------|------|------|-------|------|-------|-------|------|
| Lane Configurations | ↔     | ↕    | ↔     | ↔     | ↕     | ↔    | ↔    | ↕     | ↔    | ↔     | ↕     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12   | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           | 0%    |      | 0%    |       | 0%    |      | 0%   |       | 0%   |       | 0%    |      |
| Storage Length (ft) | 150   |      | 0     | 45    |       | 0    | 0    |       | 0    | 0     |       | 0    |
| Storage Lanes       | 1     |      | 1     | 1     |       | 0    | 0    |       | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50    |      |       | 50    |       |      | 50   |       |      | 50    |       |      |
| Lane Util. Factor   | 1.00  | 0.95 | 1.00  | 1.00  | 0.91  | 0.91 | 1.00 | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 |
| Ped Bike Factor     | 1.00  |      | 0.90  | 0.96  | 1.00  |      |      | 0.88  |      | 0.99  |       | 0.84 |
| Frt                 |       |      | 0.850 |       | 0.992 |      |      | 0.980 |      |       | 0.850 |      |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      |      | 0.962 |      | 0.950 |       |      |
| Satd. Flow (prot)   | 1770  | 3539 | 1583  | 1770  | 5039  | 0    | 0    | 1750  | 0    | 1770  | 1326  | 0    |
| Flt Permitted       | 0.089 |      |       | 0.407 |       |      |      | 0.761 |      | 0.756 |       |      |
| Satd. Flow (perm)   | 166   | 3539 | 1429  | 726   | 5039  | 0    | 0    | 1221  | 0    | 1394  | 1326  | 0    |
| Right Turn on Red   |       |      | Yes   |       |       | No   |      |       | Yes  |       |       | Yes  |
| Satd. Flow (RTOR)   |       |      | 11    |       |       |      |      | 6     |      |       |       | 489  |
| Link Speed (mph)    |       | 35   |       |       | 35    |      |      | 35    |      |       |       | 25   |
| Link Distance (ft)  |       | 248  |       |       | 471   |      |      | 634   |      |       |       | 705  |
| Travel Time (s)     |       | 4.8  |       |       | 9.2   |      |      | 12.4  |      |       |       | 19.2 |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
23: Library Ln & Seminary Rd

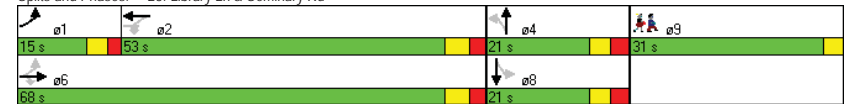
AM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | EBR    | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | ø9   |
|----------------------|-------|-------|--------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations  | ↔     | ↕     | ↔      | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↔    |
| Volume (vph)         | 185   | 600   | 10     | 20    | 1600  | 55    | 5     | 35    | 0     |      |
| Turn Type            | pm+pt | NA    | custom | Perm  | NA    | Perm  | NA    | Perm  | NA    |      |
| Protected Phases     | 1     | 6     |        |       | 2     |       | 4     |       | 8     | 9    |
| Permitted Phases     | 6     |       | 2 6    | 2     |       | 4     |       |       | 8     |      |
| Detector Phase       | 1     | 6     | 2 6    | 2     | 2     | 4     | 4     | 8     | 8     |      |
| Switch Phase         |       |       |        |       |       |       |       |       |       |      |
| Minimum Initial (s)  | 7.0   | 30.0  |        | 30.0  | 30.0  | 8.0   | 8.0   | 8.0   | 8.0   | 4.0  |
| Minimum Split (s)    | 12.0  | 36.0  |        | 36.0  | 36.0  | 21.0  | 21.0  | 21.0  | 21.0  | 31.0 |
| Total Split (s)      | 15.0  | 68.0  | 121.0  | 53.0  | 53.0  | 21.0  | 21.0  | 21.0  | 21.0  | 31.0 |
| Total Split (%)      | 12.5% | 56.7% | 100.8% | 44.2% | 44.2% | 17.5% | 17.5% | 17.5% | 17.5% | 26%  |
| Yellow Time (s)      | 3.0   | 3.5   |        | 3.5   | 3.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| All-Red Time (s)     | 2.0   | 2.5   |        | 2.5   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0   | 0.0  |
| 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)  | 5.0   | 6.0   | 6.0    | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0  |
| Lead/Lag             | Lead  |       |        | Lag   |       |       |       |       |       |      |
| Lead-Lag Optimize?   |       |       |        |       |       |       |       |       |       |      |
| Recall Mode          | None  | C-Max |        | C-Max | C-Max | None  | None  | None  | None  | None |
| Act Effct Green (s)  | 99.9  | 100.1 | 100.1  | 83.9  | 83.9  |       | 11.9  | 11.9  | 11.9  |      |
| Actuated g/C Ratio   | 0.83  | 0.83  | 0.83   | 0.70  | 0.70  |       | 0.10  | 0.10  | 0.10  |      |
| v/c Ratio            | 0.73  | 0.22  | 0.01   | 0.04  | 0.51  |       | 0.60  | 0.28  | 0.03  |      |
| Control Delay        | 31.2  | 3.0   | 1.5    | 2.0   | 2.5   |       | 66.1  | 54.0  | 0.1   |      |
| Queue Delay          | 0.0   | 0.0   | 0.0    | 0.0   | 0.1   |       | 0.0   | 0.0   | 0.0   |      |
| Total Delay          | 31.2  | 3.0   | 1.5    | 2.0   | 2.6   |       | 66.1  | 54.0  | 0.1   |      |
| LOS                  | C     | A     | A      | A     | A     |       | E     | D     | A     |      |
| Approach Delay       |       | 9.5   |        |       | 2.6   |       | 66.1  |       | 38.0  |      |
| Approach LOS         |       | A     |        |       | A     |       | E     |       | D     |      |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 11 (9%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.73  
 Intersection Signal Delay: 7.1  
 Intersection Capacity Utilization 75.7%  
 Intersection LOS: A  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 23: Library Ln & Seminary Rd



Updated 2035 Baseline with Recommended Improvements  
23: Library Ln & Seminary Rd

AM PEAK  
10/22/2011

| Lane Group              | EBL   | EBT   | EBR    | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | ø9   |
|-------------------------|-------|-------|--------|-------|-------|-------|-------|-------|-------|------|
| Protected Phases        | 1     | 6     |        |       | 2     |       | 4     |       | 8     | 9    |
| Permitted Phases        | 6     |       | 2 6    | 2     |       | 4     |       | 8     |       |      |
| Minimum Initial (s)     | 7.0   | 30.0  |        | 30.0  | 30.0  | 8.0   | 8.0   | 8.0   | 8.0   | 4.0  |
| Minimum Split (s)       | 12.0  | 36.0  |        | 36.0  | 36.0  | 21.0  | 21.0  | 21.0  | 21.0  | 31.0 |
| Total Split (s)         | 15.0  | 68.0  | 121.0  | 53.0  | 53.0  | 21.0  | 21.0  | 21.0  | 21.0  | 31.0 |
| Total Split (%)         | 12.5% | 56.7% | 100.8% | 44.2% | 44.2% | 17.5% | 17.5% | 17.5% | 17.5% | 26%  |
| Maximum Green (s)       | 10.0  | 62.0  |        | 47.0  | 47.0  | 15.0  | 15.0  | 15.0  | 15.0  | 28.0 |
| Yellow Time (s)         | 3.0   | 3.5   |        | 3.5   | 3.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| All-Red Time (s)        | 2.0   | 2.5   |        | 2.5   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0   | 0.0  |
| Lead/Lag                | Lead  |       |        | Lag   | Lag   |       |       |       |       |      |
| Lead-Lag Optimize?      |       |       |        |       |       |       |       |       |       |      |
| Vehicle Extension (s)   | 3.0   | 3.0   |        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| Minimum Gap (s)         | 3.0   | 3.0   |        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| Time Before Reduce (s)  | 0.0   | 0.0   |        | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Time To Reduce (s)      | 0.0   | 0.0   |        | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Recall Mode             | None  | C-Max |        | C-Max | C-Max | None  | None  | None  | None  | None |
| Walk Time (s)           |       |       |        |       |       |       |       |       |       | 4.0  |
| Flash Dont Walk (s)     |       |       |        |       |       |       |       |       |       | 24.0 |
| Pedestrian Calls (#/hr) |       |       |        |       |       |       |       |       |       | 0    |
| 90th %ile Green (s)     | 10.0  | 93.0  |        | 78.0  | 78.0  | 15.0  | 15.0  | 15.0  | 15.0  | 0.0  |
| 90th %ile Term Code     | Max   | Coord |        | Coord | Coord | Max   | Max   | Hold  | Hold  | Skip |
| 70th %ile Green (s)     | 10.0  | 93.5  |        | 78.5  | 78.5  | 14.5  | 14.5  | 14.5  | 14.5  | 0.0  |
| 70th %ile Term Code     | Max   | Coord |        | Coord | Coord | Gap   | Gap   | Hold  | Hold  | Skip |
| 50th %ile Green (s)     | 10.0  | 95.9  |        | 80.9  | 80.9  | 12.1  | 12.1  | 12.1  | 12.1  | 0.0  |
| 50th %ile Term Code     | Max   | Coord |        | Coord | Coord | Gap   | Gap   | Hold  | Hold  | Skip |
| 30th %ile Green (s)     | 10.0  | 98.3  |        | 83.3  | 83.3  | 9.7   | 9.7   | 9.7   | 9.7   | 0.0  |
| 30th %ile Term Code     | Max   | Coord |        | Coord | Coord | Gap   | Gap   | Hold  | Hold  | Skip |
| 10th %ile Green (s)     | 10.0  | 114.0 |        | 99.0  | 99.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| 10th %ile Term Code     | Max   | Coord |        | Coord | Coord | Skip  | Skip  | Skip  | Skip  | Skip |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 11 (9%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
33: Seminary Rd (S)/Seminary Rd (N) & Seminary Rd

AM PEAK  
10/22/2011

| Lane Group          | EBL  | EBT  | EBR  | WBL  | WBT   | WBR   | NBL  | NBT  | NBR   | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|-------|-------|------|------|-------|------|------|------|
| Lane Configurations |      | ↑↑   |      |      | ↑↑    | ↑↑    |      |      | ↑     |      |      |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12   | 12   | 12    | 12    | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           |      | 0%   |      |      | 0%    |       |      | 0%   |       |      | 0%   |      |
| Storage Length (ft) | 0    |      | 0    | 0    |       | 0     | 0    |      | 0     | 0    |      | 0    |
| Storage Lanes       | 0    |      | 0    | 0    |       | 1     | 0    |      | 1     | 0    |      | 0    |
| Taper Length (ft)   | 50   |      |      | 50   |       |       | 50   |      |       | 50   |      |      |
| Lane Util. Factor   | 1.00 | 0.95 | 1.00 | 1.00 | 0.91  | 0.91  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      |      |      |       |       |      |      |       |      |      |      |
| Frt                 |      |      |      |      | 0.976 | 0.850 |      |      | 0.865 |      |      |      |
| Flt Protected       |      |      |      |      |       |       |      |      |       |      |      |      |
| Satd. Flow (prot)   | 0    | 3539 | 0    | 0    | 3309  | 1441  | 0    | 0    | 1611  | 0    | 0    | 0    |
| Flt Permitted       |      |      |      |      |       |       |      |      |       |      |      |      |
| Satd. Flow (perm)   | 0    | 3539 | 0    | 0    | 3309  | 1441  | 0    | 0    | 1611  | 0    | 0    | 0    |
| Link Speed (mph)    |      | 35   |      |      | 35    |       |      |      | 35    |      |      | 30   |
| Link Distance (ft)  |      | 826  |      |      | 105   |       |      |      | 418   |      |      | 284  |
| Travel Time (s)     |      | 16.1 |      |      | 2.0   |       |      |      | 8.1   |      |      | 6.5  |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
41: Van Dorn St & Kenmore Ave

AM PEAK  
10/22/2011

| Lane Group          | WBL   | WBR   | NBT   | NBR  | SBL  | SBT   |
|---------------------|-------|-------|-------|------|------|-------|
| Lane Configurations | ↔     | ↔     | ↕     | ↕    | ↔    | ↕     |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900  | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12    | 12   | 12   | 12    |
| Grade (%)           | 0%    |       | 0%    |      |      | 0%    |
| Storage Length (ft) | 0     | 50    |       | 0    | 0    |       |
| Storage Lanes       | 1     | 1     |       | 0    | 0    |       |
| Taper Length (ft)   | 50    |       |       |      | 50   |       |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95  | 0.95 | 0.95 | 0.95  |
| Ped Bike Factor     |       | 0.99  | 1.00  |      |      |       |
| Frt                 |       | 0.850 | 0.993 |      |      |       |
| Flt Protected       | 0.950 |       |       |      |      | 0.998 |
| Satd. Flow (prot)   | 1770  | 1583  | 3509  | 0    | 0    | 3532  |
| Flt Permitted       | 0.950 |       |       |      |      | 0.744 |
| Satd. Flow (perm)   | 1770  | 1562  | 3509  | 0    | 0    | 2633  |
| Right Turn on Red   |       | Yes   |       | Yes  |      |       |
| Satd. Flow (RTOR)   |       | 10    | 10    |      |      |       |
| Link Speed (mph)    | 30    |       | 35    |      |      | 35    |
| Link Distance (ft)  | 805   |       | 2951  |      |      | 2586  |
| Travel Time (s)     | 18.3  |       | 57.5  |      |      | 50.4  |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
41: Van Dorn St & Kenmore Ave

AM PEAK  
10/22/2011

| Lane Group           | WBL   | WBR   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↕     | ↔     | ↕     |
| Volume (vph)         | 80    | 115   | 2270  | 15    | 325   |
| Turn Type            | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 2     |       | 1     |       | 1     |
| Permitted Phases     |       | 2     |       | 1     |       |
| Detector Phase       | 2     | 2     | 1     | 1     | 1     |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)    | 27.5  | 27.5  | 29.0  | 29.0  | 29.0  |
| Total Split (s)      | 27.5  | 27.5  | 92.5  | 92.5  | 92.5  |
| Total Split (%)      | 22.9% | 22.9% | 77.1% | 77.1% | 77.1% |
| Yellow Time (s)      | 3.5   | 3.5   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.5   | 5.5   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             | Lag   | Lag   | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?   |       |       |       |       |       |
| Recall Mode          | None  | None  | C-Max | C-Max | C-Max |
| Act Effct Green (s)  | 15.1  | 15.1  | 93.4  |       | 93.4  |
| Actuated g/C Ratio   | 0.13  | 0.13  | 0.78  |       | 0.78  |
| v/c Ratio            | 0.39  | 0.60  | 0.93  |       | 0.18  |
| Control Delay        | 52.0  | 57.3  | 18.2  |       | 0.5   |
| Queue Delay          | 0.0   | 0.0   | 0.0   |       | 0.0   |
| Total Delay          | 52.0  | 57.3  | 18.2  |       | 0.5   |
| LOS                  | D     | E     | B     |       | A     |
| Approach Delay       | 55.1  |       | 18.2  |       | 0.5   |
| Approach LOS         | E     |       | B     |       | A     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 2 (2%), Referenced to phase 1:NBSB, Start of Green  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.93  
 Intersection Signal Delay: 18.6  
 Intersection LOS: B  
 Intersection Capacity Utilization 83.3%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 41: Van Dorn St & Kenmore Ave



Updated 2035 Baseline with Recommended Improvements  
41: Van Dorn St & Kenmore Ave

AM PEAK  
10/22/2011

| Lane Group              | WBL   | WBR   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|
| Protected Phases        | 2     |       | 1     |       | 1     |
| Permitted Phases        |       | 2     |       | 1     |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 27.5  | 27.5  | 29.0  | 29.0  | 29.0  |
| Total Split (s)         | 27.5  | 27.5  | 92.5  | 92.5  | 92.5  |
| Total Split (%)         | 22.9% | 22.9% | 77.1% | 77.1% | 77.1% |
| Maximum Green (s)       | 22.0  | 22.0  | 86.5  | 86.5  | 86.5  |
| Yellow Time (s)         | 3.5   | 3.5   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lag   | Lag   | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?      |       |       |       |       |       |
| Vehicle Extension (s)   | 4.0   | 4.0   | 0.2   | 0.2   | 0.2   |
| Minimum Gap (s)         | 4.0   | 4.0   | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | C-Max | C-Max | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     | 15.0  | 15.0  | 16.0  | 16.0  | 16.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     |
| 90th %ile Green (s)     | 20.9  | 20.9  | 87.6  | 87.6  | 87.6  |
| 90th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord |
| 70th %ile Green (s)     | 17.5  | 17.5  | 91.0  | 91.0  | 91.0  |
| 70th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord |
| 50th %ile Green (s)     | 15.1  | 15.1  | 93.4  | 93.4  | 93.4  |
| 50th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord |
| 30th %ile Green (s)     | 12.7  | 12.7  | 95.8  | 95.8  | 95.8  |
| 30th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord |
| 10th %ile Green (s)     | 9.2   | 9.2   | 99.3  | 99.3  | 99.3  |
| 10th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord |

Intersection Summary

Cycle Length: 120  
Actuated Cycle Length: 120  
Offset: 2 (2%), Referenced to phase 1:NBSB, Start of Green  
Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
42: Van Dorn St & Sanger Ave/Richenbacher Ave

AM PEAK  
10/22/2011

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT  | WBR  | NBL   | NBT  | NBR  | SBL   | SBT  | SBR   |
|---------------------|-------|-------|------|-------|------|------|-------|------|------|-------|------|-------|
| Lane Configurations |       |       |      |       |      |      |       |      |      |       |      |       |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12   | 12    |
| Grade (%)           |       | 0%    |      |       | 0%   |      |       | 0%   |      |       |      | 0%    |
| Storage Length (ft) | 150   |       | 0    | 150   |      | 250  | 390   |      | 0    | 140   |      | 0     |
| Storage Lanes       | 0     |       | 1    | 1     |      | 0    | 1     |      | 0    | 1     |      | 0     |
| Taper Length (ft)   | 50    |       |      | 50    |      |      | 50    |      |      | 50    |      |       |
| Lane Util. Factor   | 1.00  | 0.95  | 0.95 | 1.00  | 1.00 | 1.00 | 1.00  | 0.95 | 0.95 | 1.00  | 0.95 | 0.95  |
| Ped Bike Factor     | 0.99  | 0.96  |      | 0.98  |      |      | 1.00  |      |      | 1.00  |      | 1.00  |
| Frt                 | 0.961 | 0.850 |      | 0.916 |      |      | 0.999 |      |      | 0.985 |      | 0.985 |
| Flt Protected       | 0.976 |       |      | 0.950 |      |      | 0.950 |      |      | 0.950 |      | 0.950 |
| Satd. Flow (prot)   | 0     | 1644  | 1504 | 1770  | 1674 | 0    | 1770  | 3535 | 0    | 1770  | 3481 | 0     |
| Flt Permitted       | 0.976 |       |      | 0.950 |      |      | 0.355 |      |      | 0.100 |      | 0.100 |
| Satd. Flow (perm)   | 0     | 1644  | 1448 | 1770  | 1674 | 0    | 661   | 3535 | 0    | 186   | 3481 | 0     |
| Right Turn on Red   |       |       | No   |       |      | Yes  |       |      | Yes  |       |      | Yes   |
| Satd. Flow (RTOR)   |       |       |      |       | 46   |      |       | 1    |      |       |      | 9     |
| Link Speed (mph)    |       | 25    |      |       | 25   |      |       | 35   |      |       |      | 35    |
| Link Distance (ft)  |       | 775   |      |       | 1172 |      |       | 844  |      |       |      | 2951  |
| Travel Time (s)     |       | 21.1  |      |       | 32.0 |      |       | 16.4 |      |       |      | 57.5  |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
42: Van Dorn St & Sanger Ave/Richenbacher Ave

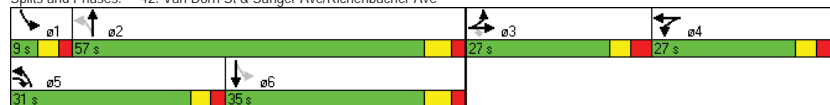
AM PEAK  
10/22/2011

| Lane Group           | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↗     | ↖     | ↘     | ↙     | ↕     | ↗     | ↖     |
| Volume (vph)         | 60    | 295   | 20    | 55    | 415   | 1870  | 20    | 395   |
| Turn Type            | NA    | pm+ov | Split | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 3     | 5     | 4     | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases     |       | 3     |       |       | 2     |       | 6     |       |
| Detector Phase       | 3     | 5     | 4     | 4     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 10.0  | 8.0   | 10.0  | 10.0  | 8.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 27.0  | 13.0  | 27.0  | 27.0  | 13.0  | 27.0  | 9.0   | 27.0  |
| Total Split (s)      | 27.0  | 31.0  | 27.0  | 27.0  | 31.0  | 57.0  | 9.0   | 35.0  |
| Total Split (%)      | 22.5% | 25.8% | 22.5% | 22.5% | 25.8% | 47.5% | 7.5%  | 29.2% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 2.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 5.0   | 6.0   | 6.0   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             | Lead  | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  | 21.0  | 44.1  | 13.9  | 13.9  | 68.1  | 60.3  | 47.4  | 40.0  |
| Actuated g/C Ratio   | 0.18  | 0.37  | 0.12  | 0.12  | 0.57  | 0.50  | 0.40  | 0.33  |
| v/c Ratio            | 0.93  | 0.45  | 0.11  | 0.57  | 0.77  | 1.14  | 0.14  | 0.41  |
| Control Delay        | 85.2  | 16.0  | 46.2  | 41.6  | 14.6  | 90.5  | 20.1  | 34.2  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 85.2  | 16.0  | 46.2  | 41.6  | 14.6  | 90.5  | 20.1  | 34.2  |
| LOS                  | F     | B     | D     | D     | B     | F     | C     | C     |
| Approach Delay       | 52.1  |       |       | 42.2  |       | 76.9  |       | 33.5  |
| Approach LOS         | D     |       |       | D     |       | E     |       | C     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 145  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.14  
 Intersection Signal Delay: 66.0  
 Intersection LOS: E  
 Intersection Capacity Utilization 103.2%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 42: Van Dorn St & Sanger Ave/Richenbacher Ave



Updated 2035 Baseline with Recommended Improvements  
42: Van Dorn St & Sanger Ave/Richenbacher Ave

AM PEAK  
10/22/2011

| Lane Group              | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL  | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|------|-------|
| Protected Phases        | 3     | 5     | 4     | 4     | 5     | 2     | 1    | 6     |
| Permitted Phases        |       | 3     |       |       | 2     |       | 6    |       |
| Minimum Initial (s)     | 10.0  | 8.0   | 10.0  | 10.0  | 8.0   | 10.0  | 4.0  | 10.0  |
| Minimum Split (s)       | 27.0  | 13.0  | 27.0  | 27.0  | 13.0  | 27.0  | 9.0  | 27.0  |
| Total Split (s)         | 27.0  | 31.0  | 27.0  | 27.0  | 31.0  | 57.0  | 9.0  | 35.0  |
| Total Split (%)         | 22.5% | 25.8% | 22.5% | 22.5% | 25.8% | 47.5% | 7.5% | 29.2% |
| Maximum Green (s)       | 21.0  | 26.0  | 21.0  | 21.0  | 26.0  | 51.0  | 4.0  | 29.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)        | 3.0   | 2.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0  | 2.0   |
| Lead/Lag                | Lead  | Lead  | Lag   | Lag   | Lead  | Lag   | Lead | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |      |       |
| Vehicle Extension (s)   | 4.0   | 2.0   | 4.0   | 4.0   | 2.0   | 0.2   | 4.0  | 0.2   |
| Minimum Gap (s)         | 4.0   | 2.0   | 4.0   | 4.0   | 2.0   | 0.2   | 4.0  | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | C-Max | None | C-Max |
| Walk Time (s)           | 7.0   |       | 7.0   | 7.0   |       | 7.0   |      | 7.0   |
| Flash Dont Walk (s)     | 14.0  |       | 14.0  | 14.0  |       | 14.0  |      | 14.0  |
| Pedestrian Calls (#/hr) | 10    |       | 10    | 10    |       | 10    |      | 10    |
| 90th %ile Green (s)     | 21.0  | 26.0  | 21.0  | 21.0  | 26.0  | 51.0  | 4.0  | 29.0  |
| 90th %ile Term Code     | Max   | Max   | Ped   | Ped   | Max   | Coord | Max  | Coord |
| 70th %ile Green (s)     | 21.0  | 27.2  | 15.2  | 15.2  | 27.2  | 53.2  | 7.6  | 33.6  |
| 70th %ile Term Code     | Max   | Gap   | Gap   | Gap   | Gap   | Coord | Gap  | Coord |
| 50th %ile Green (s)     | 21.0  | 22.9  | 12.8  | 12.8  | 22.9  | 56.0  | 7.2  | 40.3  |
| 50th %ile Term Code     | Max   | Gap   | Gap   | Gap   | Gap   | Coord | Gap  | Coord |
| 30th %ile Green (s)     | 21.0  | 19.2  | 10.5  | 10.5  | 19.2  | 70.5  | 0.0  | 46.3  |
| 30th %ile Term Code     | Max   | Gap   | Gap   | Gap   | Gap   | Coord | Skip | Coord |
| 10th %ile Green (s)     | 21.0  | 15.4  | 10.0  | 10.0  | 15.4  | 71.0  | 0.0  | 50.6  |
| 10th %ile Term Code     | Max   | Gap   | Min   | Min   | Gap   | Coord | Skip | Coord |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
43: Van Dorn St/ Van Dorn St & Braddock Rd

AM PEAK  
10/22/2011

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|------|-------|-------|-------|------|-------|------|-------|-------|-------|------|
| Lane Configurations | ↔     | ↕    | ↔     | ↔     | ↕     | ↔    | ↔     | ↕    | ↔     | ↔     | ↕     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           | 0%    |      | 0%    |       | 0%    |      | 0%    |      | 0%    |       | 0%    |      |
| Storage Length (ft) | 40    |      | 0     | 140   |       | 0    | 250   |      | 0     | 150   |       | 0    |
| Storage Lanes       | 1     |      | 0     | 1     |       | 0    | 1     |      | 0     | 1     |       | 0    |
| Taper Length (ft)   | 50    |      |       | 50    |       |      | 100   |      |       | 50    |       |      |
| Lane Util. Factor   | 1.00  | 0.95 | 0.95  | 1.00  | 0.95  | 0.95 | 1.00  | 0.95 | 0.95  | 1.00  | 0.95  | 0.95 |
| Ped Bike Factor     | 0.99  |      | 1.00  |       | 0.99  |      | 0.99  |      | 0.99  |       | 0.99  |      |
| Frt                 | 0.944 |      | 0.988 |       | 0.948 |      | 0.950 |      | 0.950 |       | 0.950 |      |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (prot)   | 1770  | 3317 | 0     | 1770  | 3491  | 0    | 1770  | 3334 | 0     | 1770  | 3344  | 0    |
| Flt Permitted       | 0.459 |      |       | 0.133 |       |      | 0.500 |      |       | 0.245 |       |      |
| Satd. Flow (perm)   | 855   | 3317 | 0     | 248   | 3491  | 0    | 931   | 3334 | 0     | 456   | 3344  | 0    |
| Right Turn on Red   | Yes   |      | Yes   |       | Yes   |      | Yes   |      | Yes   |       | Yes   |      |
| Satd. Flow (RTOR)   | 97    |      | 8     |       | 114   |      | 54    |      | 35    |       | 35    |      |
| Link Speed (mph)    | 35    |      | 35    |       | 2586  |      | 1512  |      | 22.7  |       | 24.9  |      |
| Link Distance (ft)  | 1164  |      | 1277  |       | 2586  |      | 1512  |      | 22.7  |       | 24.9  |      |
| Travel Time (s)     | 22.7  |      | 24.9  |       | 50.4  |      | 29.5  |      |       |       |       |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
43: Van Dorn St/ Van Dorn St & Braddock Rd

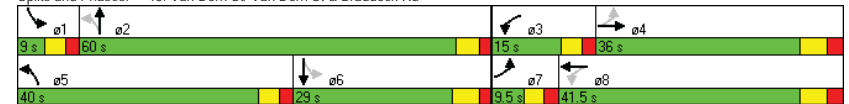
AM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     |
| Volume (vph)         | 10    | 395   | 190   | 445   | 630   | 720   | 5     | 100   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 7.0   | 4.0   | 7.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 9.5   | 34.5  | 9.0   | 34.5  | 9.0   | 28.5  | 9.0   | 29.0  |
| Total Split (s)      | 9.5   | 36.0  | 15.0  | 41.5  | 40.0  | 60.0  | 9.0   | 29.0  |
| Total Split (%)      | 7.9%  | 30.0% | 12.5% | 34.6% | 33.3% | 50.0% | 7.5%  | 24.2% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.5   | 3.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.5   | 2.0   | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -5.0  | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.0   | 6.5   | 5.0   | 6.5   | 5.0   | 0.5   | 5.0   | 6.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | None  | None  | None  |
| Act Effct Green (s)  | 38.6  | 31.3  | 51.9  | 48.2  | 58.1  | 60.8  | 18.6  | 12.3  |
| Actuated g/C Ratio   | 0.32  | 0.26  | 0.43  | 0.40  | 0.48  | 0.51  | 0.16  | 0.10  |
| v/c Ratio            | 0.03  | 0.72  | 0.71  | 0.37  | 0.93  | 0.68  | 0.04  | 0.41  |
| Control Delay        | 17.5  | 32.1  | 38.3  | 26.7  | 41.5  | 24.2  | 22.2  | 35.7  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 17.5  | 32.1  | 38.3  | 26.7  | 41.5  | 24.2  | 22.2  | 35.7  |
| LOS                  | B     | C     | D     | C     | D     | C     | C     | D     |
| Approach Delay       | 31.8  |       | 29.9  |       | 30.5  |       | 35.3  |       |
| Approach LOS         | C     |       | C     |       | C     |       | D     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 95  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.93  
 Intersection Signal Delay: 30.9  
 Intersection LOS: C  
 Intersection Capacity Utilization 96.0%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 43: Van Dorn St/ Van Dorn St & Braddock Rd





Updated 2035 Baseline with Recommended Improvements  
43: Van Dorn St/ Van Dorn St & Braddock Rd

AM PEAK  
10/22/2011

| Lane Group              | EBL  | EBT   | WBL   | WBT   | NBL   | NBT   | SBL  | SBT   |
|-------------------------|------|-------|-------|-------|-------|-------|------|-------|
| Protected Phases        | 7    | 4     | 3     | 8     | 5     | 2     | 1    | 6     |
| Permitted Phases        | 4    |       | 8     |       | 2     |       | 6    |       |
| Minimum Initial (s)     | 4.0  | 7.0   | 4.0   | 7.0   | 4.0   | 10.0  | 4.0  | 10.0  |
| Minimum Split (s)       | 9.5  | 34.5  | 9.0   | 34.5  | 9.0   | 28.5  | 9.0  | 29.0  |
| Total Split (s)         | 9.5  | 36.0  | 15.0  | 41.5  | 40.0  | 60.0  | 9.0  | 29.0  |
| Total Split (%)         | 7.9% | 30.0% | 12.5% | 34.6% | 33.3% | 50.0% | 7.5% | 24.2% |
| Maximum Green (s)       | 4.5  | 29.5  | 10.0  | 35.0  | 35.0  | 54.5  | 4.0  | 23.0  |
| Yellow Time (s)         | 3.0  | 4.0   | 3.0   | 4.0   | 3.0   | 3.5   | 3.0  | 4.0   |
| All-Red Time (s)        | 2.0  | 2.5   | 2.0   | 2.5   | 2.0   | 2.0   | 2.0  | 2.0   |
| Lead/Lag                | Lead | Lag   | Lead  | Lag   | Lead  | Lag   | Lead | Lag   |
| Lead-Lag Optimize?      |      |       |       |       |       |       |      |       |
| Vehicle Extension (s)   | 3.0  | 2.0   | 3.0   | 2.0   | 3.0   | 0.2   | 3.0  | 0.2   |
| Minimum Gap (s)         | 3.0  | 0.2   | 3.0   | 0.2   | 3.0   | 0.2   | 3.0  | 0.2   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None | C-Min | None  | C-Min | None  | None  | None | None  |
| Walk Time (s)           |      | 7.0   |       | 7.0   |       | 7.0   |      | 7.0   |
| Flash Dont Walk (s)     |      | 21.0  |       | 21.0  |       | 16.0  |      | 16.0  |
| Pedestrian Calls (#/hr) |      | 0     |       | 0     |       | 0     |      | 0     |
| 90th %ile Green (s)     | 5.8  | 29.5  | 11.3  | 35.0  | 35.0  | 53.2  | 4.0  | 21.7  |
| 90th %ile Term Code     | Max  | Coord | Max   | Coord | Max   | Gap   | Max  | Hold  |
| 70th %ile Green (s)     | 0.0  | 34.1  | 16.9  | 56.0  | 36.5  | 52.0  | 0.0  | 10.0  |
| 70th %ile Term Code     | Skip | Coord | Gap   | Coord | Max   | Hold  | Skip | Min   |
| 50th %ile Green (s)     | 0.0  | 32.0  | 16.0  | 53.0  | 39.5  | 55.0  | 0.0  | 10.0  |
| 50th %ile Term Code     | Skip | Coord | Gap   | Coord | Max   | Hold  | Skip | Min   |
| 30th %ile Green (s)     | 0.0  | 28.0  | 14.6  | 47.6  | 44.9  | 60.4  | 0.0  | 10.0  |
| 30th %ile Term Code     | Skip | Coord | Gap   | Coord | Max   | Hold  | Skip | Min   |
| 10th %ile Green (s)     | 0.0  | 33.0  | 11.6  | 49.6  | 42.9  | 58.4  | 0.0  | 10.0  |
| 10th %ile Term Code     | Skip | Coord | Gap   | Coord | Gap   | Hold  | Skip | Min   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
47: Van Dorn St/Van Dorn St & Taney Ave

AM PEAK  
10/22/2011

| Lane Group          | WBL   | WBR   | NBT   | NBR  | SBL   | SBT  |
|---------------------|-------|-------|-------|------|-------|------|
| Lane Configurations | ↔     | ↔     | ↕     | ↕    | ↔     | ↕    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |       | 0%    |      |       | 0%   |
| Storage Length (ft) | 0     | 85    |       | 0    | 180   |      |
| Storage Lanes       | 1     | 1     |       | 0    | 1     |      |
| Taper Length (ft)   | 50    |       |       |      | 50    |      |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95  | 0.95 | 1.00  | 0.95 |
| Ped Bike Factor     |       | 0.98  | 0.99  |      |       |      |
| Frnt                |       | 0.850 | 0.991 |      |       |      |
| Flt Protected       | 0.950 |       |       |      | 0.950 |      |
| Satd. Flow (prot)   | 1770  | 1583  | 3489  | 0    | 1770  | 3539 |
| Flt Permitted       | 0.950 |       |       |      | 0.040 |      |
| Satd. Flow (perm)   | 1770  | 1557  | 3489  | 0    | 75    | 3539 |
| Right Turn on Red   |       | Yes   |       | Yes  |       |      |
| Satd. Flow (RTOR)   |       | 60    | 18    |      |       |      |
| Link Speed (mph)    |       | 25    | 35    |      |       | 35   |
| Link Distance (ft)  |       | 1013  | 719   |      |       | 844  |
| Travel Time (s)     |       | 27.6  | 14.0  |      |       | 16.4 |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
47: Van Dorn St/Van Dorn St & Taney Ave

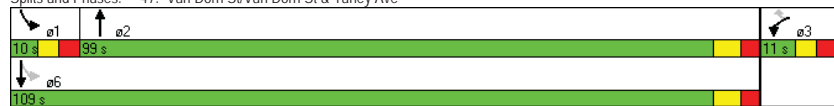
AM PEAK  
10/22/2011

| Lane Group           | WBL   | WBR  | NBT   | SBL   | SBT   |
|----------------------|-------|------|-------|-------|-------|
| Lane Configurations  | ↖ ↗   | ↖ ↗  | ↑     | ↖ ↗   | ↖ ↗   |
| Volume (vph)         | 190   | 80   | 2220  | 50    | 660   |
| Turn Type            | NA    | Perm | NA    | pm+pt | NA    |
| Protected Phases     | 3     |      | 2     | 1     | 6     |
| Permitted Phases     |       | 3    |       | 6     |       |
| Detector Phase       | 3     | 3    | 2     | 1     | 6     |
| Switch Phase         |       |      |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0  | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 10.0  | 10.0 | 23.0  | 10.0  | 23.0  |
| Total Split (s)      | 11.0  | 11.0 | 99.0  | 10.0  | 109.0 |
| Total Split (%)      | 9.2%  | 9.2% | 82.5% | 8.3%  | 90.8% |
| Yellow Time (s)      | 3.0   | 3.0  | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | -3.0  | -3.0 | -3.0  | -2.0  | -3.0  |
| Total Lost Time (s)  | 3.0   | 3.0  | 4.0   | 4.0   | 4.0   |
| Lead/Lag             |       |      | Lag   | Lead  |       |
| Lead-Lag Optimize?   |       |      |       |       |       |
| Recall Mode          | None  | None | C-Max | None  | C-Max |
| Act Effct Green (s)  | 8.0   | 8.0  | 97.0  | 105.0 | 105.0 |
| Actuated g/C Ratio   | 0.07  | 0.07 | 0.81  | 0.88  | 0.88  |
| v/c Ratio            | 1.73  | 0.54 | 0.90  | 0.36  | 0.23  |
| Control Delay        | 394.2 | 34.0 | 14.4  | 15.1  | 2.6   |
| Queue Delay          | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Total Delay          | 394.2 | 34.0 | 14.4  | 15.1  | 2.6   |
| LOS                  | F     | C    | B     | B     | A     |
| Approach Delay       | 287.4 |      | 14.4  |       | 3.4   |
| Approach LOS         | F     |      | B     |       | A     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 46 (38%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.73  
 Intersection Signal Delay: 34.2  
 Intersection LOS: C  
 Intersection Capacity Utilization 83.0%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 47: Van Dorn St/Van Dorn St & Taney Ave



Updated 2035 Baseline with Recommended Improvements  
47: Van Dorn St/Van Dorn St & Taney Ave

AM PEAK  
10/22/2011

| Lane Group              | WBL  | WBR  | NBT   | SBL  | SBT   |
|-------------------------|------|------|-------|------|-------|
| Protected Phases        | 3    |      | 2     | 1    | 6     |
| Permitted Phases        |      | 3    |       | 6    |       |
| Minimum Initial (s)     | 4.0  | 4.0  | 4.0   | 4.0  | 4.0   |
| Minimum Split (s)       | 10.0 | 10.0 | 23.0  | 10.0 | 23.0  |
| Total Split (s)         | 11.0 | 11.0 | 99.0  | 10.0 | 109.0 |
| Total Split (%)         | 9.2% | 9.2% | 82.5% | 8.3% | 90.8% |
| Maximum Green (s)       | 5.0  | 5.0  | 92.0  | 4.0  | 102.0 |
| Yellow Time (s)         | 3.0  | 3.0  | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)        | 3.0  | 3.0  | 3.0   | 3.0  | 3.0   |
| Lead/Lag                |      |      | Lag   | Lead |       |
| Lead-Lag Optimize?      |      |      |       |      |       |
| Vehicle Extension (s)   | 3.0  | 3.0  | 3.0   | 3.0  | 3.0   |
| Minimum Gap (s)         | 3.0  | 3.0  | 3.0   | 3.0  | 3.0   |
| Time Before Reduce (s)  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0  | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None | None | C-Max | None | C-Max |
| Walk Time (s)           |      |      | 5.0   |      | 5.0   |
| Flash Dont Walk (s)     |      |      | 11.0  |      | 11.0  |
| Pedestrian Calls (#/hr) |      |      | 0     |      | 0     |
| 90th %ile Green (s)     | 5.0  | 5.0  | 92.0  | 4.0  | 102.0 |
| 90th %ile Term Code     | Max  | Max  | Coord | Max  | Coord |
| 70th %ile Green (s)     | 5.0  | 5.0  | 92.0  | 4.0  | 102.0 |
| 70th %ile Term Code     | Max  | Max  | Coord | Max  | Coord |
| 50th %ile Green (s)     | 5.0  | 5.0  | 92.0  | 4.0  | 102.0 |
| 50th %ile Term Code     | Max  | Max  | Coord | Max  | Coord |
| 30th %ile Green (s)     | 5.0  | 5.0  | 92.0  | 4.0  | 102.0 |
| 30th %ile Term Code     | Max  | Max  | Coord | Max  | Coord |
| 10th %ile Green (s)     | 5.0  | 5.0  | 102.0 | 0.0  | 102.0 |
| 10th %ile Term Code     | Max  | Max  | Coord | Skip | Coord |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 46 (38%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
51: Beauregard St & Sanger Ave

AM PEAK  
10/22/2011

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT  | WBR   | NBL   | NBT  | NBR   | SBL   | SBT  | SBR   |
|---------------------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|
| Lane Configurations | ↔     | ↗    | ↘     | ↔     | ↗    | ↘     | ↔     | ↗    | ↘     | ↔     | ↗    | ↘     |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   | 12    |
| Grade (%)           | 0%    |      | 0%    |       | 0%   |       | 0%    |      | 0%    |       | 0%   |       |
| Storage Length (ft) | 250   |      | 250   | 250   |      | 0     | 175   |      | 200   | 500   |      | 0     |
| Storage Lanes       | 1     |      | 1     | 1     |      | 1     | 1     |      | 0     | 1     |      | 0     |
| Taper Length (ft)   | 50    |      | 50    | 50    |      | 50    | 50    |      | 50    | 50    |      | 50    |
| 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     |       |      | 0.74  |       |      | 0.89  |       |      | 1.00  |       |      | 0.98  |
| Frt                 |       |      | 0.850 |       |      | 0.850 |       |      | 0.985 |       |      | 0.970 |
| Flt Protected       | 0.950 |      |       | 0.950 |      |       | 0.950 |      |       | 0.950 |      |       |
| Satd. Flow (prot)   | 1770  | 1863 | 1583  | 1770  | 1863 | 1583  | 1770  | 3480 | 0     | 1770  | 3378 | 0     |
| Flt Permitted       | 0.524 |      |       | 0.687 |      |       | 0.489 |      |       | 0.070 |      |       |
| Satd. Flow (perm)   | 976   | 1863 | 1165  | 1280  | 1863 | 1417  | 911   | 3480 | 0     | 130   | 3378 | 0     |
| Right Turn on Red   |       |      | No    |       |      | No    |       |      | No    |       |      | No    |
| Satd. Flow (RTOR)   |       |      |       |       |      |       |       |      |       |       |      |       |
| Link Speed (mph)    |       | 25   |       |       | 25   |       |       | 35   |       |       |      | 35    |
| Link Distance (ft)  |       | 941  |       |       | 1259 |       |       | 947  |       |       |      | 1932  |
| Travel Time (s)     |       | 25.7 |       |       | 34.3 |       |       | 18.4 |       |       |      | 37.6  |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
51: Beauregard St & Sanger Ave

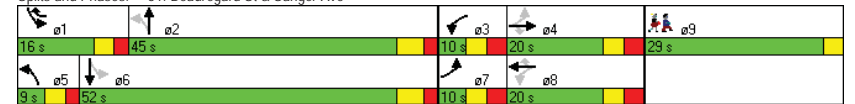
AM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   | ø9   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations  | ↔     | ↗     | ↘     | ↔     | ↗     | ↘     | ↔     | ↗     | ↘     | ↗     | ↘    |
| Volume (vph)         | 105   | 100   | 115   | 130   | 65    | 315   | 90    | 1175  | 105   | 340   |      |
| Turn Type            | pm+pt | NA    | Perm  | pm+pt | NA    | pm+ov | pm+pt | NA    | pm+pt | NA    |      |
| Protected Phases     | 7     | 4     |       | 3     | 8     | 1     | 5     | 2     | 1     | 6     | 9    |
| Permitted Phases     | 4     |       | 4     | 8     |       | 8     | 2     |       | 6     |       |      |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 1     | 5     | 2     | 1     | 6     |      |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |      |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0  |
| Minimum Split (s)    | 10.0  | 20.0  | 20.0  | 10.0  | 20.0  | 11.0  | 9.0   | 20.0  | 11.0  | 20.0  | 29.0 |
| Total Split (s)      | 10.0  | 20.0  | 20.0  | 10.0  | 20.0  | 16.0  | 9.0   | 45.0  | 16.0  | 52.0  | 29.0 |
| Total Split (%)      | 8.3%  | 16.7% | 16.7% | 8.3%  | 16.7% | 13.3% | 7.5%  | 37.5% | 13.3% | 43.3% | 24%  |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   | 3.0  |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.0  |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -5.0  | -5.0  | 0.0   | -5.0  |      |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 0.0   | 1.0   | 5.0   | 1.0   |      |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lead  | Lag   |      |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |      |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max | None |
| Act Effct Green (s)  | 19.2  | 14.0  | 14.0  | 15.2  | 12.4  | 37.4  | 71.8  | 58.6  | 85.0  | 76.8  |      |
| Actuated g/C Ratio   | 0.16  | 0.12  | 0.12  | 0.13  | 0.10  | 0.31  | 0.60  | 0.49  | 0.71  | 0.64  |      |
| v/c Ratio            | 0.54  | 0.50  | 0.91  | 0.79  | 0.36  | 0.71  | 0.15  | 0.83  | 0.26  | 0.21  |      |
| Control Delay        | 55.0  | 58.3  | 110.0 | 65.1  | 48.7  | 26.9  | 3.2   | 18.7  | 13.6  | 12.7  |      |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      |
| Total Delay          | 55.0  | 58.3  | 110.0 | 65.1  | 48.7  | 26.9  | 3.2   | 18.7  | 13.6  | 12.7  |      |
| LOS                  | D     | E     | F     | E     | D     | C     | A     | B     | B     | B     |      |
| Approach Delay       |       | 75.8  |       |       | 39.4  |       |       | 17.7  |       | 12.9  |      |
| Approach LOS         |       | E     |       |       | D     |       |       | B     |       | B     |      |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 96 (80%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 130  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.91  
 Intersection Signal Delay: 27.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 79.3%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 51: Beauregard St & Sanger Ave



Updated 2035 Baseline with Recommended Improvements  
51: Beauregard St & Sanger Ave

AM PEAK  
10/22/2011

| Lane Group              | EBL  | EBT   | EBR   | WBL  | WBT   | WBR   | NBL  | NBT   | SBL   | SBT   | ø9   |
|-------------------------|------|-------|-------|------|-------|-------|------|-------|-------|-------|------|
| Protected Phases        | 7    | 4     |       | 3    | 8     | 1     | 5    | 2     | 1     | 6     | 9    |
| Permitted Phases        | 4    |       | 4     | 8    |       | 8     | 2    |       | 6     |       |      |
| Minimum Initial (s)     | 4.0  | 4.0   | 4.0   | 4.0  | 4.0   | 4.0   | 4.0  | 4.0   | 4.0   | 4.0   | 4.0  |
| Minimum Split (s)       | 10.0 | 20.0  | 20.0  | 10.0 | 20.0  | 11.0  | 9.0  | 20.0  | 11.0  | 20.0  | 29.0 |
| Total Split (s)         | 10.0 | 20.0  | 20.0  | 10.0 | 20.0  | 16.0  | 9.0  | 45.0  | 16.0  | 52.0  | 29.0 |
| Total Split (%)         | 8.3% | 16.7% | 16.7% | 8.3% | 16.7% | 13.3% | 7.5% | 37.5% | 13.3% | 43.3% | 24%  |
| Maximum Green (s)       | 4.0  | 14.0  | 14.0  | 4.0  | 14.0  | 11.0  | 4.0  | 39.0  | 11.0  | 46.0  | 26.0 |
| Yellow Time (s)         | 3.0  | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0  | 4.0   | 3.0   | 4.0   | 3.0  |
| All-Red Time (s)        | 3.0  | 3.0   | 3.0   | 3.0  | 3.0   | 2.0   | 2.0  | 2.0   | 2.0   | 2.0   | 0.0  |
| Lead/Lag                | Lead | Lag   | Lag   | Lead | Lag   | Lead  | Lead | Lag   | Lead  | Lag   |      |
| Lead-Lag Optimize?      |      |       |       |      |       |       |      |       |       |       |      |
| Vehicle Extension (s)   | 3.0  | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0  | 4.0   | 3.0   | 4.0   | 3.0  |
| Minimum Gap (s)         | 3.0  | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0  |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0  |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0  |
| Recall Mode             | None | None  | None  | None | None  | None  | None | C-Max | None  | C-Max | None |
| Walk Time (s)           |      |       |       |      |       |       |      |       |       |       | 8.0  |
| Flash Dont Walk (s)     |      |       |       |      |       |       |      |       |       |       | 18.0 |
| Pedestrian Calls (#/hr) |      |       |       |      |       |       |      |       |       |       | 0    |
| 90th %ile Green (s)     | 4.0  | 14.0  | 14.0  | 4.0  | 14.0  | 23.9  | 8.6  | 55.1  | 23.9  | 70.4  | 0.0  |
| 90th %ile Term Code     | Max  | Max   | Max   | Max  | Hold  | Gap   | Gap  | Coord | Gap   | Coord | Skip |
| 70th %ile Green (s)     | 4.0  | 14.0  | 14.0  | 4.0  | 14.0  | 22.4  | 7.7  | 56.6  | 22.4  | 71.3  | 0.0  |
| 70th %ile Term Code     | Max  | Max   | Max   | Max  | Hold  | Gap   | Gap  | Coord | Gap   | Coord | Skip |
| 50th %ile Green (s)     | 4.0  | 14.0  | 14.0  | 4.0  | 14.0  | 21.7  | 7.2  | 57.3  | 21.7  | 71.8  | 0.0  |
| 50th %ile Term Code     | Max  | Max   | Max   | Max  | Hold  | Gap   | Gap  | Coord | Gap   | Coord | Skip |
| 30th %ile Green (s)     | 4.0  | 14.0  | 14.0  | 4.0  | 14.0  | 21.5  | 6.7  | 57.5  | 21.5  | 72.3  | 0.0  |
| 30th %ile Term Code     | Max  | Max   | Max   | Max  | Hold  | Gap   | Gap  | Coord | Gap   | Coord | Skip |
| 10th %ile Green (s)     | 23.9 | 13.9  | 13.9  | 4.0  | 0.0   | 37.7  | 5.9  | 41.4  | 37.7  | 73.2  | 0.0  |
| 10th %ile Term Code     | Hold | Gap   | Gap   | Max  | Skip  | Gap   | Gap  | Coord | Gap   | Coord | Skip |

Intersection Summary

Cycle Length: 120  
Actuated Cycle Length: 120  
Offset: 96 (80%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
52: Beauregard St & Rayburn Ave

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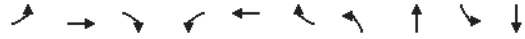
| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT   | WBR   | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|---------------------|------|-------|-------|------|-------|-------|-------|-------|------|-------|-------|------|
| Lane Configurations |      | ↔     | ↔     |      | ↔     | ↔     | ↔     | ↔     | ↔    | ↔     | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           |      | 0%    |       |      | 0%    |       |       | 0%    |      |       | 0%    |      |
| Storage Length (ft) | 0    |       | 0     | 0    |       | 0     | 190   |       | 0    | 175   |       | 0    |
| Storage Lanes       | 0    |       | 1     | 0    |       | 1     | 1     |       | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50   |       |       | 50   |       |       | 50    |       |      | 50    |       |      |
| 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     |      |       |       |      | 0.98  | 0.96  |       | 1.00  |      |       |       | 0.99 |
| Frt                 |      |       | 0.850 |      |       | 0.850 |       | 0.996 |      |       | 0.957 |      |
| Flt Protected       |      | 0.955 |       |      | 0.963 |       | 0.950 |       |      | 0.950 |       |      |
| Satd. Flow (prot)   | 0    | 1779  | 1583  | 0    | 1794  | 1583  | 1770  | 3517  | 0    | 1770  | 3364  | 0    |
| Flt Permitted       |      | 0.725 |       |      | 0.750 |       | 0.400 |       |      | 0.071 |       |      |
| Satd. Flow (perm)   | 0    | 1350  | 1583  | 0    | 1372  | 1526  | 745   | 3517  | 0    | 132   | 3364  | 0    |
| Right Turn on Red   |      |       | Yes   |      |       | Yes   |       |       | Yes  |       |       | Yes  |
| Satd. Flow (RTOR)   |      |       | 81    |      |       | 27    |       | 3     |      |       | 79    |      |
| Link Speed (mph)    |      | 25    |       |      | 25    |       |       | 35    |      |       | 35    |      |
| Link Distance (ft)  |      | 932   |       |      | 601   |       |       | 749   |      |       | 719   |      |
| Travel Time (s)     |      | 25.4  |       |      | 16.4  |       |       | 14.6  |      |       | 14.0  |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
52: Beauregard St & Rayburn Ave

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| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       | ↕     | ↕     |       | ↕     | ↕     | ↕     | ↕     | ↕     | ↕     |
| Volume (vph)         | 210   | 15    | 75    | 15    | 5     | 25    | 85    | 1575  | 15    | 365   |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | Perm  | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     |       | 4     |       |       | 8     |       | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 4     | 8     |       | 8     | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 8     | 8     | 8     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 9.0   | 22.0  | 9.0   | 22.0  |
| Total Split (s)      | 36.6  | 36.6  | 36.6  | 36.6  | 36.6  | 36.6  | 11.0  | 74.4  | 9.0   | 72.4  |
| Total Split (%)      | 30.5% | 30.5% | 30.5% | 30.5% | 30.5% | 30.5% | 9.2%  | 62.0% | 7.5%  | 60.3% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max | None  |
| Act Effct Green (s)  | 25.6  | 25.6  |       | 20.8  | 20.8  | 82.7  | 79.1  | 77.4  | 71.3  |       |
| Actuated g/C Ratio   | 0.21  | 0.21  |       | 0.17  | 0.17  | 0.69  | 0.66  | 0.64  | 0.59  |       |
| v/c Ratio            | 0.84  | 0.20  |       | 0.09  | 0.09  | 0.16  | 0.75  | 0.10  | 0.27  |       |
| Control Delay        | 69.0  | 8.7   |       | 36.7  | 12.6  | 3.4   | 8.5   | 4.0   | 1.4   |       |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Total Delay          | 69.0  | 8.7   |       | 36.7  | 12.6  | 3.4   | 8.5   | 4.0   | 1.4   |       |
| LOS                  | E     | A     |       | D     | B     | A     | A     | A     | A     |       |
| Approach Delay       | 53.8  |       |       | 23.1  |       |       | 8.2   |       | 1.5   |       |
| Approach LOS         | D     |       |       | C     |       |       | A     |       | A     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 6 (5%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.84  
 Intersection Signal Delay: 12.4  
 Intersection LOS: B  
 Intersection Capacity Utilization 82.7%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 52: Beauregard St & Rayburn Ave



Updated 2035 Baseline with Recommended Improvements  
52: Beauregard St & Rayburn Ave

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| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | SBL  | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|
| Protected Phases        |       | 4     |       |       | 8     |       | 5    | 2     | 1    | 6     |
| Permitted Phases        | 4     |       | 4     | 8     |       | 8     |      |       | 6    |       |
| Minimum Initial (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 4.0  | 10.0  | 4.0  | 10.0  |
| Minimum Split (s)       | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 9.0  | 22.0  | 9.0  | 22.0  |
| Total Split (s)         | 36.6  | 36.6  | 36.6  | 36.6  | 36.6  | 36.6  | 11.0 | 74.4  | 9.0  | 72.4  |
| Total Split (%)         | 30.5% | 30.5% | 30.5% | 30.5% | 30.5% | 30.5% | 9.2% | 62.0% | 7.5% | 60.3% |
| Maximum Green (s)       | 31.1  | 31.1  | 31.1  | 31.1  | 31.1  | 31.1  | 6.0  | 68.4  | 4.0  | 66.4  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)        | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.0  | 2.0   | 2.0  | 2.0   |
| Lead/Lag                |       |       |       |       |       |       | Lead | Lag   | Lead | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |      |       |      |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 0.2   | 3.0  | 0.2   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 0.2   | 3.0  | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None | C-Max | None | C-Max |
| Walk Time (s)           | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0  | 4.0   | 4.0  | 4.0   |
| Flash Dont Walk (s)     | 18.0  | 18.0  | 18.0  | 18.0  | 18.0  | 18.0  |      | 12.0  |      | 12.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     | 0     |      | 0     |      | 0     |
| 90th %ile Green (s)     | 31.1  | 31.1  | 31.1  | 31.1  | 31.1  | 31.1  | 6.0  | 68.4  | 4.0  | 66.4  |
| 90th %ile Term Code     | Max   | Max   | Max   | Hold  | Hold  | Hold  | Max  | Coord | Max  | Coord |
| 70th %ile Green (s)     | 30.4  | 30.4  | 30.4  | 30.4  | 30.4  | 30.4  | 6.7  | 68.4  | 4.7  | 66.4  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Hold  | Hold  | Hold  | Max  | Coord | Max  | Coord |
| 50th %ile Green (s)     | 26.7  | 26.7  | 26.7  | 26.7  | 26.7  | 26.7  | 7.5  | 81.8  | 0.0  | 69.3  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Hold  | Hold  | Hold  | Gap  | Coord | Skip | Coord |
| 30th %ile Green (s)     | 22.8  | 22.8  | 22.8  | 0.0   | 0.0   | 0.0   | 6.7  | 85.7  | 0.0  | 74.0  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Skip  | Skip  | Skip  | Gap  | Coord | Skip | Coord |
| 10th %ile Green (s)     | 17.2  | 17.2  | 17.2  | 0.0   | 0.0   | 0.0   | 5.8  | 91.3  | 0.0  | 80.5  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Skip  | Skip  | Skip  | Gap  | Coord | Skip | Coord |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 6 (5%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
53: Beauregard St & Reading Ave

AM PEAK  
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| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT   | WBR   | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|
| Lane Configurations |      | ↔     | ↔     |      | ↔     | ↔     | ↔     | ↔    | ↔     | ↔     | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           |      | 0%    |       |      | 0%    |       |       | 0%   |       |       | 0%    |      |
| Storage Length (ft) | 0    |       | 0     | 0    |       | 0     | 150   |      | 150   | 170   |       | 0    |
| Storage Lanes       | 0    |       | 1     | 0    |       | 1     |       |      | 1     | 1     |       | 0    |
| Taper Length (ft)   | 50   |       |       | 50   |       |       | 50    |      | 50    |       |       | 50   |
| Lane Util. Factor   | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 0.95 |
| Ped Bike Factor     |      |       | 0.98  |      |       | 0.98  |       |      | 0.95  |       | 1.00  |      |
| Frt                 |      |       | 0.850 |      |       | 0.850 |       |      | 0.850 |       | 0.991 |      |
| Flt Protected       |      | 0.954 |       |      | 0.962 |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (prot)   | 0    | 1777  | 1583  | 0    | 1792  | 1583  | 1770  | 3539 | 1583  | 1770  | 3490  | 0    |
| Flt Permitted       |      | 0.692 |       |      | 0.556 |       | 0.459 |      |       | 0.102 |       |      |
| Satd. Flow (perm)   | 0    | 1289  | 1544  | 0    | 1036  | 1549  | 855   | 3539 | 1502  | 190   | 3490  | 0    |
| Right Turn on Red   |      |       | Yes   |      | Yes   |       | Yes   |      | Yes   |       | Yes   |      |
| Satd. Flow (RTOR)   |      |       | 97    |      |       | 70    |       |      | 6     |       | 9     |      |
| Link Speed (mph)    |      | 25    |       |      | 25    |       |       | 35   |       |       | 35    |      |
| Link Distance (ft)  |      | 1147  |       |      | 584   |       |       | 1932 |       |       | 749   |      |
| Travel Time (s)     |      | 31.3  |       |      | 15.9  |       |       | 37.6 |       |       | 14.6  |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
53: Beauregard St & Reading Ave

AM PEAK  
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| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       | ↔     | ↔     |       | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 175   | 5     | 90    | 40    | 10    | 65    | 125   | 1460  | 10    | 30    | 400   |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    |
| Protected Phases     |       | 4     |       |       | 8     |       | 5     | 2     |       | 1     | 6     |
| Permitted Phases     | 4     |       | 4     | 8     |       | 8     | 2     |       | 2     | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 8     | 8     | 8     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 6.0   | 10.0  | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)    | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 11.0  | 24.0  | 24.0  | 11.0  | 24.0  |
| Total Split (s)      | 35.0  | 35.0  | 35.0  | 35.0  | 35.0  | 35.0  | 11.0  | 74.0  | 74.0  | 11.0  | 74.0  |
| Total Split (%)      | 29.2% | 29.2% | 29.2% | 29.2% | 29.2% | 29.2% | 9.2%  | 61.7% | 61.7% | 9.2%  | 61.7% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 6.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       |       |       | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |
| Act Effct Green (s)  |       | 22.5  | 22.5  |       | 21.3  | 21.3  | 84.3  | 78.8  | 78.8  | 80.4  | 73.3  |
| Actuated g/C Ratio   |       | 0.19  | 0.19  |       | 0.18  | 0.18  | 0.70  | 0.66  | 0.66  | 0.67  | 0.61  |
| v/c Ratio            |       | 0.80  | 0.26  |       | 0.29  | 0.21  | 0.20  | 0.68  | 0.01  | 0.15  | 0.21  |
| Control Delay        |       | 69.2  | 9.0   |       | 43.9  | 10.0  | 3.9   | 8.9   | 3.9   | 8.6   | 8.7   |
| Queue Delay          |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          |       | 69.2  | 9.0   |       | 43.9  | 10.0  | 3.9   | 8.9   | 3.9   | 8.6   | 8.7   |
| LOS                  |       | E     | A     |       | D     | B     | A     | A     | A     | A     | A     |
| Approach Delay       |       | 49.0  |       |       | 24.8  |       |       | 8.5   |       |       | 8.7   |
| Approach LOS         |       | D     |       |       | C     |       |       | A     |       |       | A     |

| Intersection Summary  |  |  |  |  |  |                        |  |  |  |  |  |
|---|--|--|--|--|--|------------------------|--|--|--|--|--|
| Cycle Length: 120   |  |  |  |  |  |                        |  |  |  |  |  |
| Actuated Cycle Length: 120  |  |  |  |  |  |                        |  |  |  |  |  |
| Offset: 112 (93%), Referenced to phase 2:NBT and 6:SBTL, Start of Green |  |  |  |  |  |                        |  |  |  |  |  |
| Natural Cycle: 90   |  |  |  |  |  |                        |  |  |  |  |  |
| Control Type: Actuated-Coordinated                                      |  |  |  |  |  |                        |  |  |  |  |  |
| Maximum v/c Ratio: 0.80   |  |  |  |  |  |                        |  |  |  |  |  |
| Intersection Signal Delay: 13.8   |  |  |  |  |  | Intersection LOS: B    |  |  |  |  |  |
| Intersection Capacity Utilization 77.7%                                 |  |  |  |  |  | ICU Level of Service D |  |  |  |  |  |
| Analysis Period (min) 15  |  |  |  |  |  |                        |  |  |  |  |  |

Splits and Phases: 53: Beauregard St & Reading Ave



Updated 2035 Baseline with Recommended Improvements  
53: Beauregard St & Reading Ave

AM PEAK  
10/22/2011

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL  | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|------|-------|-------|------|-------|
| Protected Phases        |       | 4     |       |       | 8     |       | 5    | 2     |       | 1    | 6     |
| Permitted Phases        | 4     |       | 4     | 8     |       | 8     |      |       | 2     | 6    |       |
| Minimum Initial (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 6.0  | 10.0  | 10.0  | 6.0  | 10.0  |
| Minimum Split (s)       | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 11.0 | 24.0  | 24.0  | 11.0 | 24.0  |
| Total Split (s)         | 35.0  | 35.0  | 35.0  | 35.0  | 35.0  | 35.0  | 11.0 | 74.0  | 74.0  | 11.0 | 74.0  |
| Total Split (%)         | 29.2% | 29.2% | 29.2% | 29.2% | 29.2% | 29.2% | 9.2% | 61.7% | 61.7% | 9.2% | 61.7% |
| Maximum Green (s)       | 29.0  | 29.0  | 29.0  | 29.0  | 29.0  | 29.0  | 6.0  | 68.0  | 68.0  | 6.0  | 68.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 4.0   | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0  | 2.0   | 2.0   | 2.0  | 2.0   |
| Lead/Lag                |       |       |       |       |       |       | Lead | Lag   | Lag   | Lead | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |      |       |       |      |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0  | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0  | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None | C-Max | C-Max | None | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |      | 7.0   | 7.0   |      | 7.0   |
| Flash Dont Walk (s)     | 18.0  | 18.0  | 18.0  | 18.0  | 18.0  | 18.0  |      | 8.0   | 8.0   |      | 8.0   |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     | 0     |      | 0     | 0     |      | 0     |
| 90th %ile Green (s)     | 29.0  | 29.0  | 29.0  | 29.0  | 29.0  | 29.0  | 6.0  | 68.0  | 68.0  | 6.0  | 68.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Hold  | Hold  | Hold  | Max  | Coord | Coord | Max  | Coord |
| 70th %ile Green (s)     | 26.7  | 26.7  | 26.7  | 26.7  | 26.7  | 26.7  | 8.3  | 69.8  | 69.8  | 6.5  | 68.0  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Hold  | Hold  | Hold  | Max  | Coord | Coord | Gap  | Coord |
| 50th %ile Green (s)     | 23.2  | 23.2  | 23.2  | 23.2  | 23.2  | 23.2  | 8.3  | 73.7  | 73.7  | 6.1  | 71.5  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Hold  | Hold  | Hold  | Gap  | Coord | Coord | Gap  | Coord |
| 30th %ile Green (s)     | 19.5  | 19.5  | 19.5  | 19.5  | 19.5  | 19.5  | 7.3  | 88.5  | 88.5  | 0.0  | 76.2  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Hold  | Hold  | Hold  | Gap  | Coord | Coord | Skip | Coord |
| 10th %ile Green (s)     | 14.2  | 14.2  | 14.2  | 0.0   | 0.0   | 0.0   | 6.2  | 93.8  | 93.8  | 0.0  | 82.6  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Skip  | Skip  | Skip  | Gap  | Coord | Coord | Skip | Coord |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 112 (93%), Referenced to phase 2:NBL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
54: Beauregard St & N Morgan St

AM PEAK  
10/22/2011

| Lane Group          | EBL   | EBT   | EBR  | WBL  | WBT  | WBR   | NBL  | NBT   | NBR  | SBL  | SBT   | SBR  |
|---------------------|-------|-------|------|------|------|-------|------|-------|------|------|-------|------|
| Lane Configurations |       |       |      |      |      |       |      |       |      |      |       |      |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900 | 1900 | 1900  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12   | 12   | 12    | 12   | 12    | 12   | 12   | 12    | 12   |
| Grade (%)           |       | 0%    |      |      |      |       | 0%   |       |      |      | 0%    |      |
| Storage Length (ft) | 0     |       | 175  | 0    |      | 0     | 115  |       | 0    | 115  |       | 0    |
| Storage Lanes       | 1     |       | 1    | 0    |      | 0     | 1    |       | 0    | 1    |       | 0    |
| Taper Length (ft)   | 50    |       |      | 50   |      |       | 50   |       |      | 50   |       |      |
| 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     |       | 0.96  |      |      |      | 0.99  |      | 1.00  |      |      | 1.00  |      |
| Frt                 |       | 0.850 |      |      |      | 0.912 |      | 0.998 |      |      | 0.986 |      |
| Flt Protected       | 0.950 |       |      |      |      | 0.983 |      | 0.950 |      |      | 0.950 |      |
| Satd. Flow (prot)   | 1770  | 1524  | 0    | 0    | 1650 | 0     | 1770 | 3529  | 0    | 1770 | 3473  | 0    |
| Flt Permitted       | 0.657 |       |      |      |      | 0.897 |      | 0.393 |      |      | 0.174 |      |
| Satd. Flow (perm)   | 1224  | 1524  | 0    | 0    | 1505 | 0     | 732  | 3529  | 0    | 324  | 3473  | 0    |
| Right Turn on Red   |       |       | Yes  |      |      | Yes   |      |       | Yes  |      |       | Yes  |
| Satd. Flow (RTOR)   |       | 306   |      |      |      | 81    |      |       | 2    |      |       | 12   |
| Link Speed (mph)    |       | 25    |      |      |      | 25    |      |       | 35   |      |       | 35   |
| Link Distance (ft)  |       | 775   |      |      |      | 737   |      |       | 1062 |      |       | 947  |
| Travel Time (s)     |       | 21.1  |      |      |      | 20.1  |      |       | 20.7 |      |       | 18.4 |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
54: Beauregard St & N Morgan St

AM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |
| Volume (vph)         | 245   | 0     | 40    | 0     | 5     | 1075  | 35    | 500   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     |       | 4     |       | 8     | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 8.0   | 8.0   | 8.0   | 8.0   | 4.0   | 15.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 27.0  | 27.0  | 27.0  | 27.0  | 9.0   | 21.0  | 9.0   | 21.0  |
| Total Split (s)      | 46.0  | 46.0  | 46.0  | 46.0  | 9.0   | 64.0  | 10.0  | 65.0  |
| Total Split (%)      | 38.3% | 38.3% | 38.3% | 38.3% | 7.5%  | 53.3% | 8.3%  | 54.2% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | Max   | C-Max | None  | C-Max |
| Act Effct Green (s)  | 30.3  | 30.3  |       | 30.3  | 75.1  | 71.7  | 74.6  | 68.7  |
| Actuated g/C Ratio   | 0.25  | 0.25  |       | 0.25  | 0.63  | 0.60  | 0.62  | 0.57  |
| v/c Ratio            | 0.85  | 0.02  |       | 0.28  | 0.01  | 0.56  | 0.15  | 0.30  |
| Control Delay        | 66.3  | 0.1   |       | 14.2  | 4.6   | 8.9   | 6.6   | 11.0  |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 66.3  | 0.1   |       | 14.2  | 4.6   | 8.9   | 6.6   | 11.0  |
| LOS                  | E     | A     |       | B     | A     | A     | A     | B     |
| Approach Delay       |       | 63.6  |       | 14.2  |       | 8.9   |       | 10.8  |
| Approach LOS         |       | E     |       | B     |       | A     |       | B     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 78 (65%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 16.5  
 Intersection LOS: B  
 Intersection Capacity Utilization 60.4%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 54: Beauregard St & N Morgan St



Updated 2035 Baseline with Recommended Improvements  
54: Beauregard St & N Morgan St

AM PEAK  
10/22/2011

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL  | NBT   | SBL  | SBT   |
|-------------------------|-------|-------|-------|-------|------|-------|------|-------|
| Protected Phases        |       | 4     |       | 8     | 5    | 2     | 1    | 6     |
| Permitted Phases        | 4     |       | 8     |       |      |       | 6    |       |
| Minimum Initial (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 4.0  | 15.0  | 4.0  | 10.0  |
| Minimum Split (s)       | 27.0  | 27.0  | 27.0  | 27.0  | 9.0  | 21.0  | 9.0  | 21.0  |
| Total Split (s)         | 46.0  | 46.0  | 46.0  | 46.0  | 9.0  | 64.0  | 10.0 | 65.0  |
| Total Split (%)         | 38.3% | 38.3% | 38.3% | 38.3% | 7.5% | 53.3% | 8.3% | 54.2% |
| Maximum Green (s)       | 40.0  | 40.0  | 40.0  | 40.0  | 4.0  | 58.0  | 5.0  | 59.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 2.0  | 2.0   | 2.0  | 2.0   |
| Lead/Lag                |       |       |       |       | Lead | Lag   | Lead | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |      |       |      |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0  | 4.0   | 2.0  | 4.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 0.2  | 0.2   | 0.2  | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None  | None  | None  | None  | Max  | C-Max | None | C-Max |
| Walk Time (s)           | 4.0   | 4.0   | 4.0   | 4.0   |      | 7.0   |      | 7.0   |
| Flash Dont Walk (s)     | 17.0  | 17.0  | 17.0  | 17.0  |      | 8.0   |      | 8.0   |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     |      | 0     |      | 0     |
| 90th %ile Green (s)     | 40.0  | 40.0  | 40.0  | 40.0  | 4.0  | 58.0  | 5.0  | 59.0  |
| 90th %ile Term Code     | Max   | Max   | Hold  | Hold  | MaxR | Coord | Max  | Coord |
| 70th %ile Green (s)     | 34.9  | 34.9  | 34.9  | 34.9  | 4.0  | 63.1  | 5.0  | 64.1  |
| 70th %ile Term Code     | Gap   | Gap   | Hold  | Hold  | MaxR | Coord | Max  | Coord |
| 50th %ile Green (s)     | 30.6  | 30.6  | 30.6  | 30.6  | 4.0  | 67.4  | 5.0  | 68.4  |
| 50th %ile Term Code     | Gap   | Gap   | Hold  | Hold  | MaxR | Coord | Max  | Coord |
| 30th %ile Green (s)     | 26.2  | 26.2  | 26.2  | 26.2  | 4.0  | 81.8  | 0.0  | 72.8  |
| 30th %ile Term Code     | Gap   | Gap   | Hold  | Hold  | MaxR | Coord | Skip | Coord |
| 10th %ile Green (s)     | 19.7  | 19.7  | 19.7  | 19.7  | 4.0  | 88.3  | 0.0  | 79.3  |
| 10th %ile Term Code     | Gap   | Gap   | Hold  | Hold  | MaxR | Coord | Skip | Coord |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 78 (65%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated



Updated 2035 Baseline with Recommended Improvements  
55: Beauregard St & N Armistead St

AM PEAK  
10/22/2011

| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT   | WBR   | NBL   | NBT  | NBR  | SBL   | SBT  | SBR  |
|---------------------|------|-------|-------|------|-------|-------|-------|------|------|-------|------|------|
| Lane Configurations |      | ↔     | ↔     |      | ↔     | ↔     | ↔     | ↔    |      | ↔     | ↔    | ↔    |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12   | 12   | 12    | 12   | 12   |
| Grade (%)           |      | 0%    |       |      | 0%    |       |       | 0%   |      |       | 0%   |      |
| Storage Length (ft) | 0    |       | 50    | 0    |       | 50    | 90    |      | 0    | 80    |      | 0    |
| Storage Lanes       | 0    |       | 1     | 0    |       | 1     | 1     |      | 0    | 1     |      | 0    |
| Taper Length (ft)   | 50   |       |       | 50   |       |       | 50    |      |      | 50    |      |      |
| 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     |      |       |       |      |       | 0.98  | 1.00  |      |      | 1.00  |      |      |
| Frt                 |      |       | 0.850 |      |       | 0.850 | 0.997 |      |      | 0.999 |      |      |
| Flt Protected       |      | 0.950 |       |      | 0.950 |       | 0.950 |      |      | 0.950 |      |      |
| Satd. Flow (prot)   | 0    | 1770  | 1583  | 0    | 1770  | 1583  | 1770  | 3526 | 0    | 1770  | 3535 | 0    |
| Flt Permitted       |      | 0.701 |       |      | 0.736 |       | 0.461 |      |      | 0.266 |      |      |
| Satd. Flow (perm)   | 0    | 1306  | 1583  | 0    | 1371  | 1555  | 859   | 3526 | 0    | 495   | 3535 | 0    |
| Right Turn on Red   |      |       | Yes   |      |       | Yes   |       |      | Yes  |       |      | Yes  |
| Satd. Flow (RTOR)   |      |       | 11    |      |       | 164   |       | 2    |      |       | 1    |      |
| Link Speed (mph)    |      | 25    |       |      | 25    |       |       | 35   |      |       | 35   |      |
| Link Distance (ft)  |      | 620   |       |      | 778   |       |       | 935  |      |       | 1062 |      |
| Travel Time (s)     |      | 16.9  |       |      | 21.2  |       |       | 18.2 |      |       | 20.7 |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
55: Beauregard St & N Armistead St

AM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR    | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|
| Lane Configurations  |       | ↔     | ↔     |       | ↔     | ↔      | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 30    | 0     | 10    | 80    | 0     | 220    | 5     | 845   | 70    | 475   |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | custom | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     |       | 4     |       |       | 8     |        | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 4     | 8     |       | 4      | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 8     | 8     | 4      | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |        |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0    | 5.0   | 12.0  | 5.0   | 12.0  |
| Minimum Split (s)    | 36.5  | 36.5  | 36.5  | 36.5  | 36.5  | 36.5   | 10.0  | 22.0  | 10.0  | 22.0  |
| Total Split (s)      | 42.0  | 42.0  | 42.0  | 42.0  | 42.0  | 42.0   | 10.0  | 63.0  | 15.0  | 68.0  |
| Total Split (%)      | 35.0% | 35.0% | 35.0% | 35.0% | 35.0% | 35.0%  | 8.3%  | 52.5% | 12.5% | 56.7% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5    | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0    | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 6.5    | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       |       |        | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |        |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None   | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  |       | 13.6  | 13.6  |       | 13.6  | 13.6   | 89.4  | 84.4  | 94.6  | 91.9  |
| Actuated g/C Ratio   |       | 0.11  | 0.11  |       | 0.11  | 0.11   | 0.74  | 0.70  | 0.79  | 0.77  |
| v/c Ratio            |       | 0.22  | 0.06  |       | 0.55  | 0.74   | 0.01  | 0.37  | 0.16  | 0.19  |
| Control Delay        |       | 49.2  | 21.4  |       | 62.3  | 30.3   | 0.8   | 3.7   | 2.9   | 2.1   |
| Queue Delay          |       | 0.0   | 0.0   |       | 0.0   | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          |       | 49.2  | 21.4  |       | 62.3  | 30.3   | 0.8   | 3.7   | 2.9   | 2.1   |
| LOS                  |       | D     | C     |       | E     | C      | A     | A     | A     | A     |
| Approach Delay       |       | 42.1  |       |       | 38.9  |        |       | 3.7   |       | 2.2   |
| Approach LOS         |       | D     |       |       | D     |        |       | A     |       | A     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 82 (68%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 10.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 61.3%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 55: Beauregard St & N Armistead St



Updated 2035 Baseline with Recommended Improvements  
55: Beauregard St & N Armistead St

AM PEAK  
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| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|
| Protected Phases        |       | 4     |       |       | 8     |       | 5    | 2     | 1     | 6     |
| Permitted Phases        | 4     |       | 4     | 8     |       | 4     | 2    |       | 6     |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 5.0  | 12.0  | 5.0   | 12.0  |
| Minimum Split (s)       | 36.5  | 36.5  | 36.5  | 36.5  | 36.5  | 36.5  | 10.0 | 22.0  | 10.0  | 22.0  |
| Total Split (s)         | 42.0  | 42.0  | 42.0  | 42.0  | 42.0  | 42.0  | 10.0 | 63.0  | 15.0  | 68.0  |
| Total Split (%)         | 35.0% | 35.0% | 35.0% | 35.0% | 35.0% | 35.0% | 8.3% | 52.5% | 12.5% | 56.7% |
| Maximum Green (s)       | 35.5  | 35.5  | 35.5  | 35.5  | 35.5  | 35.5  | 5.0  | 57.0  | 10.0  | 62.0  |
| Yellow Time (s)         | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.0  | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0  | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       |       |       | Lead | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |      |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2  | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None | C-Max | None  | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |      | 4.0   |       | 4.0   |
| Flash Dont Walk (s)     | 23.0  | 23.0  | 23.0  | 23.0  | 23.0  | 23.0  |      | 12.0  |       | 12.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     | 0     |      | 0     |       | 0     |
| 90th %ile Green (s)     | 21.9  | 21.9  | 21.9  | 21.9  | 21.9  | 21.9  | 5.0  | 72.4  | 8.2   | 75.6  |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Hold  | Hold  | Gap   | Max  | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 15.5  | 15.5  | 15.5  | 15.5  | 15.5  | 15.5  | 0.0  | 79.9  | 7.1   | 92.0  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Hold  | Hold  | Gap   | Skip | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 12.9  | 12.9  | 12.9  | 12.9  | 12.9  | 12.9  | 0.0  | 83.1  | 6.5   | 94.6  |
| 50th %ile Term Code     | Hold  | Hold  | Hold  | Gap   | Gap   | Hold  | Skip | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 10.5  | 10.5  | 10.5  | 10.5  | 10.5  | 10.5  | 0.0  | 85.9  | 6.1   | 97.0  |
| 30th %ile Term Code     | Hold  | Hold  | Hold  | Gap   | Gap   | Hold  | Skip | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 7.0   | 7.0   | 7.0   | 0.0   | 0.0   | 7.0   | 0.0  | 100.5 | 0.0   | 100.5 |
| 10th %ile Term Code     | Min   | Min   | Min   | Skip  | Skip  | Min   | Skip | Coord | Skip  | Coord |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 82 (68%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
56: Beauregard St & Quantrell Ave

AM PEAK  
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| Lane Group          | WBL   | WBR   | NBT  | NBR   | SBL   | SBT  |
|---------------------|-------|-------|------|-------|-------|------|
| Lane Configurations |       |       |      |       |       |      |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           | 0%    |       | 0%   |       |       | 0%   |
| Storage Length (ft) | 0     | 50    |      | 85    | 100   |      |
| Storage Lanes       | 1     | 1     |      | 1     | 1     |      |
| Taper Length (ft)   | 50    |       |      |       | 50    |      |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95 | 1.00  | 1.00  | 0.95 |
| Ped Bike Factor     | 0.98  |       |      |       |       |      |
| Friction            |       | 0.850 |      | 0.850 |       |      |
| Flt Protected       | 0.950 |       |      |       | 0.950 |      |
| Satd. Flow (prot)   | 1770  | 1583  | 3539 | 1583  | 1770  | 3539 |
| Flt Permitted       | 0.950 |       |      |       | 0.331 |      |
| Satd. Flow (perm)   | 1740  | 1583  | 3539 | 1583  | 617   | 3539 |
| Right Turn on Red   |       | Yes   |      | Yes   |       |      |
| Satd. Flow (RTOR)   |       | 92    |      | 24    |       |      |
| Link Speed (mph)    | 30    |       | 35   |       | 35    |      |
| Link Distance (ft)  | 751   |       | 931  |       | 935   |      |
| Travel Time (s)     | 17.1  |       | 18.1 |       | 18.2  |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
56: Beauregard St & Quantrell Ave

AM PEAK  
10/22/2011

| Lane Group           | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↑     | ↔     | ↔     | ↑     |
| Volume (vph)         | 140   | 100   | 765   | 30    | 25    | 540   |
| Turn Type            | NA    | Perm  | NA    | Perm  | Perm  | NA    |
| Protected Phases     | 4     |       | 2     |       |       | 6     |
| Permitted Phases     |       | 4     |       | 2     | 6     |       |
| Detector Phase       | 4     | 4     | 2     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |
| Minimum Initial (s)  | 6.0   | 6.0   | 10.0  | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)    | 12.0  | 12.0  | 16.0  | 16.0  | 16.0  | 16.0  |
| Total Split (s)      | 42.0  | 42.0  | 78.0  | 78.0  | 78.0  | 78.0  |
| Total Split (%)      | 35.0% | 35.0% | 65.0% | 65.0% | 65.0% | 65.0% |
| Yellow Time (s)      | 3.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |
| Recall Mode          | None  | None  | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s)  | 15.6  | 15.6  | 92.4  | 92.4  | 92.4  | 92.4  |
| Actuated g/C Ratio   | 0.13  | 0.13  | 0.77  | 0.77  | 0.77  | 0.77  |
| v/c Ratio            | 0.65  | 0.38  | 0.30  | 0.03  | 0.06  | 0.21  |
| Control Delay        | 62.4  | 16.0  | 8.2   | 3.5   | 2.4   | 2.1   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 62.4  | 16.0  | 8.2   | 3.5   | 2.4   | 2.1   |
| LOS                  | E     | B     | A     | A     | A     | A     |
| Approach Delay       | 43.1  |       | 8.1   |       |       | 2.1   |
| Approach LOS         | D     |       | A     |       |       | A     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 65 (54%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.65  
 Intersection Signal Delay: 11.2      Intersection LOS: B  
 Intersection Capacity Utilization 38.9%      ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 56: Beauregard St & Quantrell Ave



Updated 2035 Baseline with Recommended Improvements  
56: Beauregard St & Quantrell Ave

AM PEAK  
10/22/2011

| Lane Group              | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 4     |       | 2     |       |       | 6     |
| Permitted Phases        |       | 4     |       | 2     | 6     |       |
| Minimum Initial (s)     | 6.0   | 6.0   | 10.0  | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 12.0  | 12.0  | 16.0  | 16.0  | 16.0  | 16.0  |
| Total Split (s)         | 42.0  | 42.0  | 78.0  | 78.0  | 78.0  | 78.0  |
| Total Split (%)         | 35.0% | 35.0% | 65.0% | 65.0% | 65.0% | 65.0% |
| Maximum Green (s)       | 36.0  | 36.0  | 72.0  | 72.0  | 72.0  | 72.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s)           |       |       |       |       |       |       |
| Flash Dont Walk (s)     |       |       |       |       |       |       |
| Pedestrian Calls (#/hr) |       |       |       |       |       |       |
| 90th %ile Green (s)     | 21.5  | 21.5  | 86.5  | 86.5  | 86.5  | 86.5  |
| 90th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 70th %ile Green (s)     | 18.0  | 18.0  | 90.0  | 90.0  | 90.0  | 90.0  |
| 70th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 50th %ile Green (s)     | 15.6  | 15.6  | 92.4  | 92.4  | 92.4  | 92.4  |
| 50th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 30th %ile Green (s)     | 13.2  | 13.2  | 94.8  | 94.8  | 94.8  | 94.8  |
| 30th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 10th %ile Green (s)     | 9.8   | 9.8   | 98.2  | 98.2  | 98.2  | 98.2  |
| 10th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord | Coord |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 65 (54%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
58: Lincoln Rd/Gloucester Rd & Beauregard St

AM PEAK  
10/22/2011

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT  | WBR  | NBL  | NBT  | NBR   | SBL  | SBT   | SBR  |
|---------------------|-------|------|------|-------|------|------|------|------|-------|------|-------|------|
| Lane Configurations | ↔     | ↕    | ↔    | ↔     | ↕    | ↔    | ↔    | ↕    | ↔     | ↔    | ↕     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12   | 12   | 12   | 12   | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |      | 0%   |       | 0%   |      | 0%   |      | 0%    |      | 0%    |      |
| Storage Length (ft) | 175   |      | 0    | 175   |      | 0    | 0    |      | 0     | 0    |       | 0    |
| Storage Lanes       | 1     |      | 0    | 1     |      | 0    | 0    |      | 1     | 0    |       | 0    |
| Taper Length (ft)   | 50    |      |      | 50    |      |      | 50   |      | 50    |      |       | 50   |
| 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 |
| Ped Bike Factor     | 0.99  |      |      |       |      |      |      |      | 0.98  |      |       |      |
| Frt                 | 0.977 |      |      |       |      |      |      |      | 0.850 |      | 0.865 |      |
| Flt Protected       | 0.950 |      |      | 0.950 |      |      |      |      | 0.950 |      |       |      |
| Satd. Flow (prot)   | 1770  | 3439 | 0    | 1770  | 3539 | 0    | 0    | 1770 | 1583  | 0    | 1611  | 0    |
| Flt Permitted       | 0.374 |      |      | 0.240 |      |      |      |      | 0.754 |      |       |      |
| Satd. Flow (perm)   | 697   | 3439 | 0    | 447   | 3539 | 0    | 0    | 1405 | 1559  | 0    | 1611  | 0    |
| Right Turn on Red   |       |      | Yes  |       |      | Yes  |      |      | Yes   |      |       | Yes  |
| Satd. Flow (RTOR)   | 22    |      |      |       |      |      |      |      | 54    |      | 235   |      |
| Link Speed (mph)    | 35    |      |      |       | 35   |      |      |      | 35    |      | 30    |      |
| Link Distance (ft)  | 545   |      |      |       | 931  |      |      |      | 614   |      | 831   |      |
| Travel Time (s)     | 10.6  |      |      |       | 18.1 |      |      |      | 12.0  |      | 18.9  |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
58: Lincoln Rd/Gloucester Rd & Beauregard St

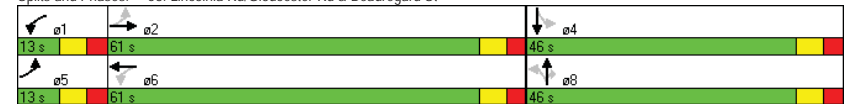
AM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↕     | ↕     |
| Volume (vph)         | 5     | 745   | 30    | 650   | 210   | 0     | 50    | 0     |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     |       | 8     |       | 4     |
| Permitted Phases     | 2     |       | 6     |       | 8     |       | 8     |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 8     | 8     | 8     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 13.0  | 33.0  | 13.0  | 17.0  | 37.0  | 37.0  | 37.0  | 36.0  |
| Total Split (s)      | 13.0  | 61.0  | 13.0  | 61.0  | 46.0  | 46.0  | 46.0  | 46.0  |
| Total Split (%)      | 10.8% | 50.8% | 10.8% | 50.8% | 38.3% | 38.3% | 38.3% | 38.3% |
| Yellow Time (s)      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | None  | None  | None  |
| Act Effct Green (s)  | 76.4  | 73.0  | 80.1  | 78.6  | 24.8  | 24.8  | 24.8  |       |
| Actuated g/C Ratio   | 0.64  | 0.61  | 0.67  | 0.66  | 0.21  | 0.21  | 0.21  |       |
| v/c Ratio            | 0.01  | 0.45  | 0.09  | 0.30  | 0.78  | 0.15  | 0.01  |       |
| Control Delay        | 14.4  | 22.5  | 4.0   | 6.0   | 62.5  | 9.8   | 0.0   |       |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Total Delay          | 14.4  | 22.5  | 4.0   | 6.0   | 62.5  | 9.8   | 0.0   |       |
| LOS                  | B     | C     | A     | A     | E     | A     | A     |       |
| Approach Delay       | 22.5  |       | 5.9   |       | 52.4  |       | 0.0   |       |
| Approach LOS         | C     |       | A     |       | D     |       | A     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 40 (33%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 85  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.78  
 Intersection Signal Delay: 20.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 55.6%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 58: Lincoln Rd/Gloucester Rd & Beauregard St



Updated 2035 Baseline with Recommended Improvements  
58: Lincolnia Rd/Gloucester Rd & Beauregard St

AM PEAK  
10/22/2011

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 5     | 2     | 1     | 6     |       | 8     |       | 4     |
| Permitted Phases        | 2     |       | 6     |       | 8     |       | 8     |       |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 13.0  | 33.0  | 13.0  | 17.0  | 37.0  | 37.0  | 37.0  | 36.0  |
| Total Split (s)         | 13.0  | 61.0  | 13.0  | 61.0  | 46.0  | 46.0  | 46.0  | 46.0  |
| Total Split (%)         | 10.8% | 50.8% | 10.8% | 50.8% | 38.3% | 38.3% | 38.3% | 38.3% |
| Maximum Green (s)       | 6.0   | 54.0  | 6.0   | 54.0  | 39.0  | 39.0  | 39.0  | 39.0  |
| Yellow Time (s)         | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | C-Min | None  | C-Min | None  | None  | None  | None  |
| Walk Time (s)           |       | 7.0   |       | 7.0   |       | 7.0   |       | 7.0   |
| Flash Dont Walk (s)     |       | 19.0  |       |       | 23.0  | 23.0  |       | 22.0  |
| Pedestrian Calls (#/hr) |       | 0     |       |       | 0     | 0     |       | 0     |
| 90th %ile Green (s)     | 6.0   | 57.8  | 7.5   | 59.3  | 33.7  | 33.7  | 33.7  | 33.7  |
| 90th %ile Term Code     | Gap   | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Hold  |
| 70th %ile Green (s)     | 0.0   | 63.9  | 6.6   | 77.5  | 28.5  | 28.5  | 28.5  | 28.5  |
| 70th %ile Term Code     | Skip  | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Hold  |
| 50th %ile Green (s)     | 0.0   | 68.0  | 6.2   | 81.2  | 24.8  | 24.8  | 24.8  | 24.8  |
| 50th %ile Term Code     | Skip  | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Hold  |
| 30th %ile Green (s)     | 0.0   | 84.9  | 0.0   | 84.9  | 21.1  | 21.1  | 21.1  | 21.1  |
| 30th %ile Term Code     | Skip  | Coord | Skip  | Coord | Gap   | Gap   | Gap   | Hold  |
| 10th %ile Green (s)     | 0.0   | 90.3  | 0.0   | 90.3  | 15.7  | 15.7  | 15.7  | 15.7  |
| 10th %ile Term Code     | Skip  | Coord | Skip  | Coord | Gap   | Gap   | Gap   | Hold  |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 40 (33%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
59: Beauregard St & N Chambliss St/Plaza at Landmark

AM PEAK  
10/22/2011

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|------|-------|-------|-------|------|-------|------|-------|-------|-------|------|
| Lane Configurations |       |      |       |       |       |      |       |      |       |       |       |      |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           |       | 0%   |       |       | 0%    |      |       | 0%   |       |       | 0%    |      |
| Storage Length (ft) | 0     |      | 75    | 0     |       | 0    | 150   |      | 140   | 170   |       | 0    |
| Storage Lanes       | 1     |      | 1     | 1     |       | 0    | 1     |      | 1     | 1     |       | 0    |
| Taper Length (ft)   | 50    |      |       | 50    |       |      | 50    |      |       | 50    |       |      |
| Lane Util. Factor   | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 0.95 |
| Ped Bike Factor     |       |      |       |       | 0.99  |      |       |      | 0.98  |       |       |      |
| Frt                 |       |      | 0.850 |       | 0.925 |      |       |      | 0.850 |       | 0.999 |      |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (prot)   | 1770  | 1863 | 1583  | 1770  | 1712  | 0    | 1770  | 3539 | 1583  | 1770  | 3536  | 0    |
| Flt Permitted       | 0.728 |      |       | 0.663 |       |      | 0.269 |      |       | 0.349 |       |      |
| Satd. Flow (perm)   | 1356  | 1863 | 1583  | 1235  | 1712  | 0    | 501   | 3539 | 1546  | 650   | 3536  | 0    |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |       | Yes  |       | Yes   |       | Yes  |
| Satd. Flow (RTOR)   |       |      | 570   |       | 22    |      |       |      | 37    |       | 1     |      |
| Link Speed (mph)    |       | 30   |       |       | 25    |      |       | 25   |       |       | 35    |      |
| Link Distance (ft)  |       | 622  |       |       | 252   |      |       | 846  |       |       | 464   |      |
| Travel Time (s)     |       | 14.1 |       |       | 6.9   |      |       | 23.1 |       |       | 9.0   |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
59: Beauregard St & N Chambliss St/Plaza at Landmark

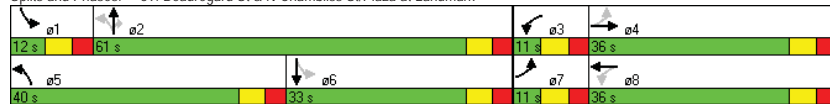
AM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↘     | ↖     | ↗     | ↖     | ↗     | ↘     | ↖     | ↗     |
| Volume (vph)         | 120   | 25    | 530   | 65    | 20    | 385   | 745   | 40    | 20    | 610   |
| Turn Type            | pm+pt | NA    | Free  | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     | 5     | 2     |       | 1     | 6     |
| Permitted Phases     | 4     |       | Free  | 8     |       | 2     |       | 2     | 6     |       |
| Detector Phase       | 7     | 4     |       | 3     | 8     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   |       | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 1.0   | 4.0   |
| Minimum Split (s)    | 11.0  | 36.0  |       | 11.0  | 36.0  | 12.0  | 22.0  | 22.0  | 12.0  | 22.0  |
| Total Split (s)      | 11.0  | 36.0  | 0.0   | 11.0  | 36.0  | 40.0  | 61.0  | 61.0  | 12.0  | 33.0  |
| Total Split (%)      | 9.2%  | 30.0% | 0.0%  | 9.2%  | 30.0% | 33.3% | 50.8% | 50.8% | 10.0% | 27.5% |
| Yellow Time (s)      | 4.0   | 4.0   |       | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   |       | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -5.0  |
| Total Lost Time (s)  | 7.0   | 7.0   | 4.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 2.0   |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  |       | None  | None  | C-Min | C-Min | None  | C-Min |       |
| Act Effct Green (s)  | 12.3  | 8.1   | 120.0 | 14.3  | 7.4   | 87.0  | 79.6  | 79.6  | 61.0  | 61.1  |
| Actuated g/C Ratio   | 0.10  | 0.07  | 1.00  | 0.12  | 0.06  | 0.72  | 0.66  | 0.66  | 0.51  | 0.51  |
| v/c Ratio            | 0.79  | 0.21  | 0.36  | 0.37  | 0.35  | 0.67  | 0.34  | 0.04  | 0.06  | 0.37  |
| Control Delay        | 81.2  | 56.6  | 0.6   | 50.9  | 39.5  | 18.1  | 4.9   | 0.6   | 12.0  | 20.8  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 81.2  | 56.6  | 0.6   | 50.9  | 39.5  | 18.1  | 4.9   | 0.6   | 12.0  | 20.8  |
| LOS                  | F     | E     | A     | D     | D     | B     | A     | A     | B     | C     |
| Approach Delay       |       | 17.0  |       |       | 46.5  |       | 9.1   |       |       | 20.5  |
| Approach LOS         |       | B     |       |       | D     |       | A     |       |       | C     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 90 (75%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 85  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 15.5  
 Intersection LOS: B  
 Intersection Capacity Utilization 66.7%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 59: Beauregard St & N Chambliss St/Plaza at Landmark



Updated 2035 Baseline with Recommended Improvements  
59: Beauregard St & N Chambliss St/Plaza at Landmark

AM PEAK  
10/22/2011

| Lane Group              | EBL  | EBT   | EBR  | WBL  | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|------|-------|------|------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 7    | 4     |      | 3    | 8     | 5     | 2     |       | 1     | 6     |
| Permitted Phases        | 4    |       | Free | 8    |       | 2     |       | 2     | 6     |       |
| Minimum Initial (s)     | 4.0  | 4.0   |      | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 1.0   | 4.0   |
| Minimum Split (s)       | 11.0 | 36.0  |      | 11.0 | 36.0  | 12.0  | 22.0  | 22.0  | 12.0  | 22.0  |
| Total Split (s)         | 11.0 | 36.0  | 0.0  | 11.0 | 36.0  | 40.0  | 61.0  | 61.0  | 12.0  | 33.0  |
| Total Split (%)         | 9.2% | 30.0% | 0.0% | 9.2% | 30.0% | 33.3% | 50.8% | 50.8% | 10.0% | 27.5% |
| Maximum Green (s)       | 4.0  | 29.0  |      | 4.0  | 29.0  | 33.0  | 54.0  | 54.0  | 5.0   | 26.0  |
| Yellow Time (s)         | 4.0  | 4.0   |      | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0  | 3.0   |      | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead | Lag   |      | Lead | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |      |       |      |      |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0  | 3.0   |      | 3.0  | 3.0   | 2.0   | 4.0   | 4.0   | 2.0   | 4.0   |
| Minimum Gap (s)         | 3.0  | 3.0   |      | 3.0  | 3.0   | 2.0   | 4.0   | 4.0   | 2.0   | 4.0   |
| Time Before Reduce (s)  | 0.0  | 0.0   |      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   |      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | None  |      | None | None  | None  | C-Min | C-Min | None  | C-Min |
| Walk Time (s)           |      | 7.0   |      |      | 7.0   |       |       |       |       |       |
| Flash Dont Walk (s)     |      | 22.0  |      |      | 22.0  |       |       |       |       |       |
| Pedestrian Calls (#/hr) |      | 0     |      |      | 0     |       |       |       |       |       |
| 90th %ile Green (s)     | 4.0  | 10.3  |      | 4.0  | 10.3  | 34.8  | 72.1  | 72.1  | 5.6   | 42.9  |
| 90th %ile Term Code     | Max  | Hold  |      | Max  | Gap   | Gap   | Coord | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 4.0  | 8.3   |      | 4.0  | 8.3   | 28.5  | 74.6  | 74.6  | 5.1   | 51.2  |
| 70th %ile Term Code     | Max  | Hold  |      | Max  | Gap   | Gap   | Coord | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 6.8  | 7.2   |      | 6.8  | 7.2   | 24.3  | 73.1  | 73.1  | 4.9   | 53.7  |
| 50th %ile Term Code     | Max  | Gap   |      | Max  | Hold  | Gap   | Coord | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 12.2 | 0.0   |      | 24.9 | 5.7   | 20.4  | 81.1  | 81.1  | 0.0   | 53.7  |
| 30th %ile Term Code     | Gap  | Skip  |      | Hold | Gap   | Gap   | Coord | Coord | Skip  | Coord |
| 10th %ile Green (s)     | 8.7  | 8.7   |      | 0.0  | 0.0   | 11.4  | 97.3  | 97.3  | 0.0   | 78.9  |
| 10th %ile Term Code     | Gap  | Hold  |      | Skip | Skip  | Gap   | Coord | Coord | Skip  | Coord |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 90 (75%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
61: N Beauregard St/Beauregard St & Route 236

AM PEAK  
10/22/2011

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|------|------|-------|-------|------|-------|------|-------|-------|-------|------|
| Lane Configurations | ↔↔    | ↔↔   | ↔    | ↔↔    | ↔↔    | ↔    | ↔     | ↔    | ↔     | ↔     | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           | 0%    |      | 0%   |       | 0%    |      | 0%    |      | 0%    |       | 0%    |      |
| Storage Length (ft) | 425   |      | 0    | 215   |       | 500  | 120   |      | 0     | 0     |       | 0    |
| Storage Lanes       | 2     |      | 0    | 1     |       | 1    | 1     |      | 1     | 0     |       | 1    |
| Taper Length (ft)   | 50    |      |      | 50    |       |      | 50    |      |       | 50    |       |      |
| Lane Util. Factor   | 0.97  | 0.91 | 0.91 | 1.00  | 0.91  | 1.00 | 1.00  | 1.00 | 1.00  | 0.95  | 0.95  | 1.00 |
| Ped Bike Factor     | 1.00  |      |      |       | 0.98  |      | 0.98  |      | 0.98  |       | 0.98  |      |
| Frt                 | 0.997 |      |      |       | 0.850 |      | 0.850 |      | 0.850 |       | 0.850 |      |
| Flt Protected       | 0.950 |      |      | 0.950 |       |      | 0.950 |      |       | 0.950 | 0.959 |      |
| Satd. Flow (prot)   | 3433  | 5064 | 0    | 1770  | 5085  | 1583 | 1770  | 1863 | 1583  | 1681  | 1697  | 1583 |
| Flt Permitted       | 0.950 |      |      | 0.950 |       |      | 0.950 |      |       | 0.950 | 0.959 |      |
| Satd. Flow (perm)   | 3433  | 5064 | 0    | 1770  | 5085  | 1553 | 1770  | 1863 | 1551  | 1681  | 1697  | 1545 |
| Right Turn on Red   |       |      | Yes  |       |       | Yes  |       |      | Yes   |       |       | Yes  |
| Satd. Flow (RTOR)   | 2     |      |      |       | 487   |      | 7     |      | 25    |       | 25    |      |
| Link Speed (mph)    | 40    |      |      |       | 40    |      | 25    |      | 25    |       | 25    |      |
| Link Distance (ft)  | 1126  |      |      |       | 1020  |      | 665   |      | 846   |       | 846   |      |
| Travel Time (s)     | 19.2  |      |      |       | 17.4  |      | 18.1  |      | 23.1  |       | 23.1  |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
61: N Beauregard St/Beauregard St & Route 236

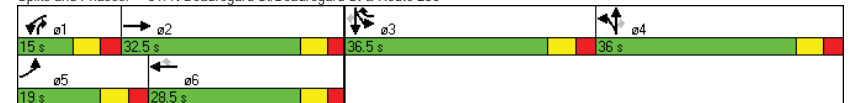
AM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Lane Configurations  | ↔↔    | ↔↔    | ↔     | ↔↔    | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |  |
| Volume (vph)         | 535   | 1245  | 60    | 1020  | 540   | 105   | 95    | 65    | 870   | 70    | 265   |  |
| Turn Type            | Prot  | NA    | Prot  | NA    | pm+ov | Split | NA    | pm+ov | Split | NA    | Perm  |  |
| Protected Phases     | 5     | 2     | 1     | 6     | 3     | 4     | 4     | 1     | 3     | 3     |       |  |
| Permitted Phases     |       |       |       |       | 6     |       |       | 4     |       |       | 3     |  |
| Detector Phase       | 5     | 2     | 1     | 6     | 3     | 4     | 4     | 1     | 3     | 3     | 3     |  |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |  |
| Minimum Initial (s)  | 8.0   | 20.0  | 8.0   | 20.0  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |  |
| Minimum Split (s)    | 15.0  | 26.5  | 15.0  | 28.5  | 36.0  | 36.0  | 36.0  | 15.0  | 36.0  | 36.0  | 36.0  |  |
| Total Split (s)      | 19.0  | 32.5  | 15.0  | 28.5  | 36.5  | 36.0  | 36.0  | 15.0  | 36.5  | 36.5  | 36.5  |  |
| Total Split (%)      | 15.8% | 27.1% | 12.5% | 23.8% | 30.4% | 30.0% | 30.0% | 12.5% | 30.4% | 30.4% | 30.4% |  |
| Yellow Time (s)      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |  |
| All-Red Time (s)     | 3.0   | 2.5   | 3.0   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |  |
| Lost Time Adjust (s) | -3.0  | -2.5  | -3.0  | -2.5  | -3.0  | -3.0  | -3.0  | -3.0  | -5.0  | -5.0  | -5.0  |  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 2.0   | 2.0   | 2.0   |  |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lead  | Lead  | Lead  |  |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |       |  |
| Recall Mode          | None  | Min   | None  | Min   | C-Min | None  | None  | None  | C-Min | C-Min | C-Min |  |
| Act Effct Green (s)  | 31.0  | 46.0  | 12.5  | 24.5  | 57.0  | 16.0  | 16.0  | 28.5  | 34.5  | 34.5  | 34.5  |  |
| Actuated g/C Ratio   | 0.26  | 0.38  | 0.10  | 0.20  | 0.48  | 0.13  | 0.13  | 0.24  | 0.29  | 0.29  | 0.29  |  |
| v/c Ratio            | 0.65  | 0.70  | 0.35  | 1.06  | 0.58  | 0.48  | 0.41  | 0.19  | 1.05  | 1.03  | 0.45  |  |
| Control Delay        | 44.5  | 35.5  | 54.9  | 90.1  | 5.8   | 54.2  | 51.8  | 29.4  | 87.3  | 84.2  | 4.2   |  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Total Delay          | 44.5  | 35.5  | 54.9  | 90.1  | 5.8   | 54.2  | 51.8  | 29.4  | 87.3  | 84.2  | 4.2   |  |
| LOS                  | D     | D     | D     | F     | A     | D     | D     | C     | F     | F     | A     |  |
| Approach Delay       | 38.2  |       | 60.7  |       | 47.2  |       | 67.8  |       |       |       |       |  |
| Approach LOS         | D     |       | E     |       | D     |       | E     |       |       |       |       |  |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 90.5 (75%), Referenced to phase 3:SBTL, Start of Green  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.06  
 Intersection Signal Delay: 53.4  
 Intersection LOS: D  
 Intersection Capacity Utilization 77.6%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 61: N Beauregard St/Beauregard St & Route 236



Updated 2035 Baseline with Recommended Improvements  
61: N Beauregard St/Beauregard St & Route 236

AM PEAK  
10/22/2011

| Lane Group              | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 5     | 2     | 1     | 6     | 3     | 4     | 4     | 1     | 3     | 3     |       |
| Permitted Phases        |       |       |       | 6     | 4     |       |       | 4     |       |       | 3     |
| Minimum Initial (s)     | 8.0   | 20.0  | 8.0   | 20.0  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)       | 15.0  | 26.5  | 15.0  | 28.5  | 36.0  | 36.0  | 36.0  | 15.0  | 36.0  | 36.0  | 36.0  |
| Total Split (s)         | 19.0  | 32.5  | 15.0  | 28.5  | 36.5  | 36.0  | 36.0  | 15.0  | 36.5  | 36.5  | 36.5  |
| Total Split (%)         | 15.8% | 27.1% | 12.5% | 23.8% | 30.4% | 30.0% | 30.0% | 12.5% | 30.4% | 30.4% | 30.4% |
| Maximum Green (s)       | 12.0  | 26.0  | 8.0   | 22.0  | 29.5  | 29.0  | 29.0  | 8.0   | 29.5  | 29.5  | 29.5  |
| Yellow Time (s)         | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 2.5   | 3.0   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | Min   | None  | Min   | C-Min | None  | None  | None  | C-Min | C-Min | C-Min |
| Walk Time (s)           |       |       |       | 7.0   | 7.0   | 7.0   | 7.0   |       | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |       |       | 14.0  | 22.0  | 22.0  | 22.0  |       | 22.0  | 22.0  | 22.0  |
| Pedestrian Calls (#/hr) |       |       |       | 0     | 0     | 0     | 0     |       | 0     | 0     | 0     |
| 90th %ile Green (s)     | 23.0  | 32.4  | 12.6  | 22.0  | 29.5  | 18.0  | 18.0  | 12.6  | 29.5  | 29.5  | 29.5  |
| 90th %ile Term Code     | Max   | Hold  | Gap   | Max   | Coord | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 70th %ile Green (s)     | 25.9  | 37.6  | 10.3  | 22.0  | 29.5  | 15.1  | 15.1  | 10.3  | 29.5  | 29.5  | 29.5  |
| 70th %ile Term Code     | Max   | Hold  | Gap   | Max   | Coord | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 50th %ile Green (s)     | 28.0  | 41.2  | 8.8   | 22.0  | 29.5  | 13.0  | 13.0  | 8.8   | 29.5  | 29.5  | 29.5  |
| 50th %ile Term Code     | Max   | Hold  | Gap   | Max   | Coord | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 30th %ile Green (s)     | 30.1  | 44.1  | 8.0   | 22.0  | 29.5  | 10.9  | 10.9  | 8.0   | 29.5  | 29.5  | 29.5  |
| 30th %ile Term Code     | Max   | Hold  | Min   | Max   | Coord | Gap   | Gap   | Min   | Coord | Coord | Coord |
| 10th %ile Green (s)     | 33.0  | 62.0  | 0.0   | 22.0  | 29.5  | 8.0   | 8.0   | 0.0   | 29.5  | 29.5  | 29.5  |
| 10th %ile Term Code     | Max   | Hold  | Skip  | Max   | Coord | Min   | Min   | Skip  | Coord | Coord | Coord |

Intersection Summary

Cycle Length: 120  
Actuated Cycle Length: 120  
Offset: 90.5 (75%), Referenced to phase 3:SBTL, Start of Green  
Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
67: Beauregard St & Lincolnia Rd Spur

AM PEAK  
10/22/2011

| Lane Group          | EBL  | EBT  | WBT   | WBR  | SBL  | SBR  |
|---------------------|------|------|-------|------|------|------|
| Lane Configurations |      | ↑↑   | ↑↑    |      |      |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           |      | 0%   | 0%    |      | 0%   |      |
| Storage Length (ft) |      | 0    |       | 0    | 0    | 0    |
| Storage Lanes       |      | 0    |       | 0    | 0    | 0    |
| Taper Length (ft)   |      | 50   |       |      | 50   |      |
| Lane Util. Factor   | 1.00 | 0.95 | 0.95  | 0.95 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      |       |      |      |      |
| Frt                 |      |      | 0.960 |      |      |      |
| Flt Protected       |      |      |       |      |      |      |
| Satd. Flow (prot)   | 0    | 3539 | 3398  | 0    | 0    | 0    |
| Flt Permitted       |      |      |       |      |      |      |
| Satd. Flow (perm)   | 0    | 3539 | 3398  | 0    | 0    | 0    |
| Link Speed (mph)    |      | 35   | 35    |      | 25   |      |
| Link Distance (ft)  |      | 464  | 545   |      | 446  |      |
| Travel Time (s)     |      | 9.0  | 10.6  |      | 12.2 |      |

Intersection Summary

Area Type: Other



| Lane Group          | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
|---------------------|------|------|------|------|------|------|
| Lane Configurations | ↑↑   |      |      | ↑↑   | ↑↑   |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12   | 12   | 12   | 12   |
| Grade (%)           | 0%   |      |      | 0%   | 0%   |      |
| Storage Length (ft) |      | 0    | 0    |      | 0    | 0    |
| Storage Lanes       |      | 0    | 0    |      | 1    | 0    |
| Taper Length (ft)   |      |      | 50   |      | 50   |      |
| Lane Util. Factor   | 0.95 | 0.95 | 0.95 | 0.95 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      |      |      |      |      |
| Frt                 |      |      |      |      |      |      |
| Flt Protected       |      |      |      |      |      |      |
| Satd. Flow (prot)   | 3539 | 0    | 0    | 3539 | 1863 | 0    |
| Flt Permitted       |      |      |      |      |      |      |
| Satd. Flow (perm)   | 3539 | 0    | 0    | 3539 | 1863 | 0    |
| Right Turn on Red   |      | Yes  |      |      |      | Yes  |
| Satd. Flow (RTOR)   |      |      |      |      |      |      |
| Link Speed (mph)    | 35   |      |      | 35   | 30   |      |
| Link Distance (ft)  | 849  |      |      | 826  | 612  |      |
| Travel Time (s)     | 16.5 |      |      | 16.1 | 13.9 |      |

**Intersection Summary**

Area Type: Other

| Lane Group           | EBT   | WBT   | ø2   |
|----------------------|-------|-------|------|
| Lane Configurations  | ↑↑    | ↑↑    |      |
| Volume (vph)         | 395   | 1320  |      |
| Turn Type            | NA    | NA    |      |
| Protected Phases     | 4     | 8     | 2    |
| Permitted Phases     |       |       |      |
| Detector Phase       | 4     | 8     |      |
| Switch Phase         |       |       |      |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0  |
| Minimum Split (s)    | 20.0  | 20.0  | 20.0 |
| Total Split (s)      | 20.0  | 20.0  | 20.0 |
| Total Split (%)      | 50.0% | 50.0% | 50%  |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5  |
| All-Red Time (s)     | 0.5   | 0.5   | 0.5  |
| Lost Time Adjust (s) | 0.0   | 0.0   |      |
| Total Lost Time (s)  | 4.0   | 4.0   |      |

**Lead/Lag**

Lead-Lag Optimize?

Recall Mode: None None C-Max

Act Effct Green (s): 16.0 16.0

Actuated g/C Ratio: 0.40 0.40

v/c Ratio: 0.30 1.00

Control Delay: 8.9 40.4

Queue Delay: 0.0 0.0

Total Delay: 8.9 40.4

LOS: A D

Approach Delay: 8.9 40.4

Approach LOS: A D

**Intersection Summary**

Cycle Length: 40

Actuated Cycle Length: 40

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

Natural Cycle: 50

Control Type: Actuated-Coordinated

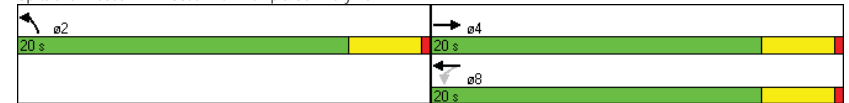
Maximum v/c Ratio: 1.00

Intersection Signal Delay: 33.1 Intersection LOS: C

Intersection Capacity Utilization 92.6% ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 72: South HOV Ramp & Seminary Rd



Updated 2035 Baseline with Recommended Improvements  
72: South HOV Ramp & Seminary Rd

AM PEAK  
10/22/2011

|                         | →     | ←     |       |
|-------------------------|-------|-------|-------|
| Lane Group              | EBT   | WBT   | ø2    |
| Protected Phases        | 4     | 8     | 2     |
| Permitted Phases        |       |       |       |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 20.0  | 20.0  | 20.0  |
| Total Split (s)         | 20.0  | 20.0  | 20.0  |
| Total Split (%)         | 50.0% | 50.0% | 50%   |
| Maximum Green (s)       | 16.0  | 16.0  | 16.0  |
| Yellow Time (s)         | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)        | 0.5   | 0.5   | 0.5   |
| Lead/Lag                |       |       |       |
| Lead-Lag Optimize?      |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | C-Max |
| Walk Time (s)           | 5.0   | 5.0   | 5.0   |
| Flash Dont Walk (s)     | 11.0  | 11.0  | 11.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     |
| 90th %ile Green (s)     | 16.0  | 16.0  | 16.0  |
| 90th %ile Term Code     | Hold  | Max   | Coord |
| 70th %ile Green (s)     | 16.0  | 16.0  | 16.0  |
| 70th %ile Term Code     | Hold  | Max   | Coord |
| 50th %ile Green (s)     | 16.0  | 16.0  | 16.0  |
| 50th %ile Term Code     | Hold  | Max   | Coord |
| 30th %ile Green (s)     | 16.0  | 16.0  | 16.0  |
| 30th %ile Term Code     | Hold  | Max   | Coord |
| 10th %ile Green (s)     | 16.0  | 16.0  | 16.0  |
| 10th %ile Term Code     | Hold  | Max   | Coord |

Intersection Summary

Cycle Length: 40  
Actuated Cycle Length: 40  
Offset: 0 (0%), Referenced to phase 2:NBL and 6: Start of Green  
Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
90: N Jordan St & Seminary Rd/ Seminary Rd

AM PEAK  
10/22/2011

|                     | →     | ↘    | ↙    | ←     | ↖     | ↗     |
|---------------------|-------|------|------|-------|-------|-------|
| Lane Group          | EBT   | EBR  | WBL  | WBT   | NBL   | NBR   |
| Lane Configurations | ↕↕    |      |      | ↕↕    | ↕↕    | ↕↕    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900  |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12    |
| Grade (%)           | 0%    |      |      | 0%    | 0%    |       |
| Storage Length (ft) |       | 0    | 0    |       | 0     | 250   |
| Storage Lanes       |       | 0    | 0    |       | 1     | 1     |
| Taper Length (ft)   |       |      | 50   |       | 50    |       |
| Lane Util. Factor   | 0.95  | 0.95 | 0.95 | 0.95  | 1.00  | 1.00  |
| Ped Bike Factor     | 0.99  |      |      |       |       |       |
| Frt                 | 0.975 |      |      |       |       | 0.850 |
| Flt Protected       |       |      |      | 0.999 | 0.950 |       |
| Satd. Flow (prot)   | 3426  | 0    | 0    | 3536  | 1770  | 1583  |
| Flt Permitted       |       |      |      | 0.929 | 0.950 |       |
| Satd. Flow (perm)   | 3426  | 0    | 0    | 3288  | 1770  | 1583  |
| Right Turn on Red   |       | Yes  |      |       |       | Yes   |
| Satd. Flow (RTOR)   | 22    |      |      |       |       | 86    |
| Link Speed (mph)    | 35    |      |      | 35    | 25    |       |
| Link Distance (ft)  | 759   |      |      | 747   | 1370  |       |
| Travel Time (s)     | 14.8  |      |      | 14.6  | 37.4  |       |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
90: N Jordan St & Seminary Rd/ Seminary Rd

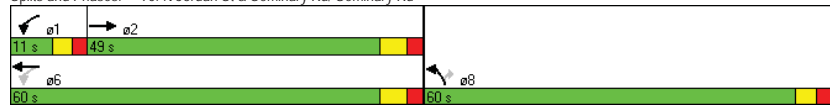
AM PEAK  
10/22/2011

| Lane Group           | EBT   | WBL   | WBT   | NBL   | NBR   |
|----------------------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔↔    | ↔     | ↔↔    | ↔     | ↔     |
| Volume (vph)         | 545   | 20    | 1020  | 525   | 80    |
| Turn Type            | NA    | pm+pt | NA    | NA    | Perm  |
| Protected Phases     | 2     | 1     | 6     | 8     |       |
| Permitted Phases     |       | 6     |       |       | 8     |
| Detector Phase       | 2     | 1     | 6     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 10.0  | 6.0   | 16.0  | 6.0   | 6.0   |
| Minimum Split (s)    | 30.5  | 11.0  | 30.5  | 22.0  | 22.0  |
| Total Split (s)      | 49.0  | 11.0  | 60.0  | 60.0  | 60.0  |
| Total Split (%)      | 40.8% | 9.2%  | 50.0% | 50.0% | 50.0% |
| Yellow Time (s)      | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.5   | 2.0   | 2.5   | 3.0   | 3.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.5   | 5.0   | 6.5   | 6.0   | 6.0   |
| Lead/Lag             | Lag   | Lead  |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |
| Recall Mode          | C-Max | None  | C-Max | None  | None  |
| Act Effct Green (s)  | 62.8  |       | 62.8  | 44.7  | 44.7  |
| Actuated g/C Ratio   | 0.52  |       | 0.52  | 0.37  | 0.37  |
| v/c Ratio            | 0.39  |       | 0.65  | 0.86  | 0.13  |
| Control Delay        | 6.5   |       | 24.3  | 47.6  | 4.6   |
| Queue Delay          | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Total Delay          | 6.5   |       | 24.3  | 47.6  | 4.6   |
| LOS                  | A     |       | C     | D     | A     |
| Approach Delay       | 6.5   |       | 24.3  | 41.9  |       |
| Approach LOS         | A     |       | C     | D     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 108 (90%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 23.9  
 Intersection LOS: C  
 Intersection Capacity Utilization 81.9%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 90: N Jordan St & Seminary Rd/ Seminary Rd



Updated 2035 Baseline with Recommended Improvements  
90: N Jordan St & Seminary Rd/ Seminary Rd

AM PEAK  
10/22/2011

| Lane Group              | EBT   | WBL  | WBT   | NBL   | NBR   |
|-------------------------|-------|------|-------|-------|-------|
| Protected Phases        | 2     | 1    | 6     | 8     |       |
| Permitted Phases        |       | 6    |       |       | 8     |
| Minimum Initial (s)     | 10.0  | 6.0  | 16.0  | 6.0   | 6.0   |
| Minimum Split (s)       | 30.5  | 11.0 | 30.5  | 22.0  | 22.0  |
| Total Split (s)         | 49.0  | 11.0 | 60.0  | 60.0  | 60.0  |
| Total Split (%)         | 40.8% | 9.2% | 50.0% | 50.0% | 50.0% |
| Maximum Green (s)       | 42.5  | 6.0  | 53.5  | 54.0  | 54.0  |
| Yellow Time (s)         | 4.0   | 3.0  | 4.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.5   | 2.0  | 2.5   | 3.0   | 3.0   |
| Lead/Lag                | Lag   | Lead |       |       |       |
| Lead-Lag Optimize?      |       |      |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Recall Mode             | C-Max | None | C-Max | None  | None  |
| Walk Time (s)           | 12.0  |      | 12.0  | 4.0   | 4.0   |
| Flash Dont Walk (s)     | 12.0  |      | 12.0  | 12.0  | 12.0  |
| Pedestrian Calls (#/hr) | 0     |      | 0     | 0     | 0     |
| 90th %ile Green (s)     | 53.5  | 0.0  | 53.5  | 54.0  | 54.0  |
| 90th %ile Term Code     | Coord | Skip | Coord | Max   | Max   |
| 70th %ile Green (s)     | 57.7  | 0.0  | 57.7  | 49.8  | 49.8  |
| 70th %ile Term Code     | Coord | Skip | Coord | Gap   | Gap   |
| 50th %ile Green (s)     | 62.2  | 0.0  | 62.2  | 45.3  | 45.3  |
| 50th %ile Term Code     | Coord | Skip | Coord | Gap   | Gap   |
| 30th %ile Green (s)     | 66.8  | 0.0  | 66.8  | 40.7  | 40.7  |
| 30th %ile Term Code     | Coord | Skip | Coord | Gap   | Gap   |
| 10th %ile Green (s)     | 73.9  | 0.0  | 73.9  | 33.6  | 33.6  |
| 10th %ile Term Code     | Coord | Skip | Coord | Gap   | Gap   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 108 (90%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
93: Hammond M.S./Encore Apts & Seminary Rd

AM PEAK  
10/22/2011

| Lane Group          | EBL  | EBT   | EBR  | WBL  | WBT  | WBR  | NBL  | NBT   | NBR   | SBL   | SBT  | SBR   |
|---------------------|------|-------|------|------|------|------|------|-------|-------|-------|------|-------|
| Lane Configurations |      | ↕↕    |      |      | ↕↕   |      |      | ↕     | ↕     | ↕     |      | ↕     |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12    | 12   | 12   | 12   | 12   | 12   | 12    | 12    | 12    | 12   | 12    |
| Grade (%)           |      | 0%    |      |      | 0%   |      |      | 0%    |       |       | 0%   |       |
| Storage Length (ft) | 0    |       | 0    | 0    |      | 0    | 0    |       | 0     | 0     |      | 0     |
| Storage Lanes       | 0    |       | 0    | 0    |      | 0    | 0    |       | 1     | 1     |      | 1     |
| Taper Length (ft)   | 50   |       |      | 50   |      |      | 50   |       |       | 50    |      |       |
| Lane Util. Factor   | 0.95 | 0.95  | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  |
| Ped Bike Factor     |      |       |      |      |      |      |      |       | 0.850 |       |      | 0.850 |
| Frt Protected       |      | 0.999 |      |      |      |      |      | 0.950 |       | 0.950 |      |       |
| Satd. Flow (prot)   | 0    | 3536  | 0    | 0    | 3539 | 0    | 0    | 1770  | 1583  | 1770  | 0    | 1583  |
| Frt Permitted       |      | 0.911 |      |      |      |      |      | 0.950 |       | 0.740 |      |       |
| Satd. Flow (perm)   | 0    | 3224  | 0    | 0    | 3539 | 0    | 0    | 1770  | 1583  | 1378  | 0    | 1583  |
| Right Turn on Red   |      |       | Yes  |      |      | Yes  |      |       | Yes   |       |      | Yes   |
| Satd. Flow (RTOR)   |      |       |      |      | 1    |      |      |       | 5     |       |      | 43    |
| Link Speed (mph)    |      | 35    |      |      |      | 35   |      |       | 25    |       |      | 25    |
| Link Distance (ft)  |      | 471   |      |      | 295  |      |      |       | 257   |       |      | 372   |
| Travel Time (s)     |      | 9.2   |      |      | 5.7  |      |      |       | 7.0   |       |      | 10.1  |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
93: Hammond M.S./Encore Apts & Seminary Rd

AM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | WBT   | NBT   | NBR    | SBL   | SBR    |
|----------------------|-------|-------|-------|-------|--------|-------|--------|
| Lane Configurations  |       | ↕↕    | ↕↕    | ↕     | ↕      | ↕     | ↕      |
| Volume (vph)         | 10    | 625   | 1590  | 0     | 5      | 25    | 45     |
| Turn Type            | Perm  | NA    | NA    | NA    | custom | D.Pm  | custom |
| Protected Phases     |       | 2     | 2     | 4     |        |       |        |
| Permitted Phases     | 2     |       |       |       | 2      | 4     | 4      |
| Detector Phase       | 2     | 2     | 2     | 4     | 2      | 4     | 4      |
| Switch Phase         |       |       |       |       |        |       |        |
| Minimum Initial (s)  | 10.0  | 10.0  | 10.0  | 6.0   | 10.0   | 6.0   | 6.0    |
| Minimum Split (s)    | 21.5  | 21.5  | 21.5  | 29.0  | 21.5   | 29.0  | 29.0   |
| Total Split (s)      | 91.0  | 91.0  | 91.0  | 29.0  | 91.0   | 29.0  | 29.0   |
| Total Split (%)      | 75.8% | 75.8% | 75.8% | 24.2% | 75.8%  | 24.2% | 24.2%  |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.0   | 3.5    | 3.0   | 3.0    |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 3.0   | 2.0    | 3.0   | 3.0    |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0    | 0.0   | 0.0    |
| Total Lost Time (s)  | 5.5   | 5.5   | 5.5   | 6.0   | 5.5    | 6.0   | 6.0    |

Lead/Lag

Lead-Lag Optimize?

| Recall Mode         | C-Max | C-Max | C-Max | None | C-Max | None | None |
|---------------------|-------|-------|-------|------|-------|------|------|
| Act Effct Green (s) |       | 104.0 | 104.0 | 8.0  | 104.0 | 8.0  | 8.0  |
| Actuated g/C Ratio  |       | 0.87  | 0.87  | 0.07 | 0.87  | 0.07 | 0.07 |
| v/c Ratio           |       | 0.24  | 0.56  | 0.23 | 0.00  | 0.29 | 0.33 |
| Control Delay       |       | 1.9   | 0.7   | 56.8 | 1.2   | 60.6 | 24.0 |
| Queue Delay         |       | 0.1   | 1.0   | 0.0  | 0.0   | 0.0  | 0.0  |
| Total Delay         |       | 1.9   | 1.7   | 56.8 | 1.2   | 60.6 | 24.0 |
| LOS                 |       | A     | A     | E    | A     | E    | C    |
| Approach Delay      |       | 1.9   | 1.7   | 48.1 |       |      |      |
| Approach LOS        |       | A     | A     | D    |       |      |      |

Intersection Summary


Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 2 (2%), Referenced to phase 2:WBEB, Start of Yellow  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.56  
 Intersection Signal Delay: 3.4  
 Intersection LOS: A  
 Intersection Capacity Utilization 68.7%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 93: Hammond M.S./Encore Apts & Seminary Rd



Updated 2035 Baseline with Recommended Improvements  
93: Hammond M.S./Encore Apts & Seminary Rd

AM PEAK  
10/22/2011




| Lane Group              | EBL   | EBT   | WBT   | NBT   | NBR   | SBL   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 2     | 2     | 4     |       |       |       |
| Permitted Phases        | 2     |       |       |       | 2     | 4     | 4     |
| Minimum Initial (s)     | 10.0  | 10.0  | 10.0  | 6.0   | 10.0  | 6.0   | 6.0   |
| Minimum Split (s)       | 21.5  | 21.5  | 21.5  | 29.0  | 21.5  | 29.0  | 29.0  |
| Total Split (s)         | 91.0  | 91.0  | 91.0  | 29.0  | 91.0  | 29.0  | 29.0  |
| Total Split (%)         | 75.8% | 75.8% | 75.8% | 24.2% | 75.8% | 24.2% | 24.2% |
| Maximum Green (s)       | 85.5  | 85.5  | 85.5  | 23.0  | 85.5  | 23.0  | 23.0  |
| Yellow Time (s)         | 3.5   | 3.5   | 3.5   | 3.0   | 3.5   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   |
| Lead/Lag                |       |       |       |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | C-Max | C-Max | C-Max | None  | C-Max | None  | None  |
| Walk Time (s)           |       |       |       | 7.0   |       | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |       |       | 16.0  |       | 16.0  | 16.0  |
| Pedestrian Calls (#/hr) |       |       |       | 0     |       | 0     | 0     |
| 90th %ile Green (s)     | 97.7  | 97.7  | 97.7  | 10.8  | 97.7  | 10.8  | 10.8  |
| 90th %ile Term Code     | Coord | Coord | Coord | Gap   | Coord | Gap   | Gap   |
| 70th %ile Green (s)     | 99.5  | 99.5  | 99.5  | 9.0   | 99.5  | 9.0   | 9.0   |
| 70th %ile Term Code     | Coord | Coord | Coord | Gap   | Coord | Gap   | Gap   |
| 50th %ile Green (s)     | 100.7 | 100.7 | 100.7 | 7.8   | 100.7 | 7.8   | 7.8   |
| 50th %ile Term Code     | Coord | Coord | Coord | Gap   | Coord | Gap   | Gap   |
| 30th %ile Green (s)     | 102.0 | 102.0 | 102.0 | 6.5   | 102.0 | 6.5   | 6.5   |
| 30th %ile Term Code     | Coord | Coord | Coord | Gap   | Coord | Gap   | Gap   |
| 10th %ile Green (s)     | 114.5 | 114.5 | 114.5 | 0.0   | 114.5 | 0.0   | 0.0   |
| 10th %ile Term Code     | Coord | Coord | Coord | Skip  | Coord | Skip  | Skip  |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 2 (2%), Referenced to phase 2:WBEB, Start of Yellow  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
100: Kenmore Ave & Seminary Rd

AM PEAK  
10/22/2011



| Lane Group          | EBL  | EBT   | EBR  | WBL  | WBT   | WBR  | NBL  | NBT  | NBR   | SBL  | SBT  | SBR   |
|---------------------|------|-------|------|------|-------|------|------|------|-------|------|------|-------|
| Lane Configurations |      | ↑↑↑   |      |      | ↑↑↑   |      |      |      | ↑     |      |      | ↑     |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12   | 12    | 12   | 12   | 12    |
| Grade (%)           |      | 0%    |      |      | 0%    |      |      | 0%   |       |      | 0%   |       |
| Storage Length (ft) | 0    |       | 0    | 0    |       | 0    | 0    |      | 0     | 0    |      | 0     |
| Storage Lanes       | 0    |       | 0    | 0    |       | 0    | 0    |      | 1     | 0    |      | 1     |
| Taper Length (ft)   | 50   |       |      | 50   |       |      | 50   |      |       | 50   |      |       |
| Lane Util. Factor   | 1.00 | 0.91  | 0.91 | 1.00 | 0.91  | 0.91 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  |
| Ped Bike Factor     |      |       |      |      |       |      |      |      |       |      |      |       |
| Friction            |      | 0.988 |      |      | 0.995 |      |      |      | 0.865 |      |      | 0.865 |
| Flt Protected       |      |       |      |      |       |      |      |      |       |      |      |       |
| Satd. Flow (prot)   | 0    | 5024  | 0    | 0    | 5060  | 0    | 0    | 0    | 1611  | 0    | 0    | 1611  |
| Flt Permitted       |      |       |      |      |       |      |      |      |       |      |      |       |
| Satd. Flow (perm)   | 0    | 5024  | 0    | 0    | 5060  | 0    | 0    | 0    | 1611  | 0    | 0    | 1611  |
| Link Speed (mph)    |      | 35    |      |      | 35    |      |      |      | 30    |      |      | 30    |
| Link Distance (ft)  |      | 105   |      |      | 248   |      |      |      | 787   |      |      | 674   |
| Travel Time (s)     |      | 2.0   |      |      | 4.8   |      |      |      | 17.9  |      |      | 15.3  |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
102: Seminary Rd (N) & North HOV Ramp

AM PEAK  
10/22/2011

| Lane Group          | EBL  | EBT  | WBT   | WBR  | SBL  | SBR  |
|---------------------|------|------|-------|------|------|------|
| Lane Configurations |      |      | ↑↑↑   |      |      | ↑    |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           |      | 0%   | 0%    |      | 0%   |      |
| Storage Length (ft) | 0    |      |       | 0    | 0    | 0    |
| Storage Lanes       | 0    |      |       | 0    | 0    | 1    |
| Taper Length (ft)   | 50   |      |       |      | 50   |      |
| Lane Util. Factor   | 1.00 | 1.00 | 0.91  | 0.91 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      |       |      |      |      |
| Frt                 |      |      | 0.973 |      |      |      |
| Flt Protected       |      |      |       |      |      |      |
| Satd. Flow (prot)   | 0    | 0    | 4948  | 0    | 0    | 1863 |
| Flt Permitted       |      |      |       |      |      |      |
| Satd. Flow (perm)   | 0    | 0    | 4948  | 0    | 0    | 1863 |
| Link Speed (mph)    |      | 35   | 35    |      | 30   |      |
| Link Distance (ft)  |      | 172  | 135   |      | 561  |      |
| Travel Time (s)     |      | 3.4  | 2.6   |      | 12.8 |      |

**Intersection Summary**  
Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
191: I-395 SB On-Ramp & Seminary Rd (S)

AM PEAK  
10/22/2011

| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL   | SBT   | SBR  |
|---------------------|------|-------|-------|------|------|------|------|------|------|-------|-------|------|
| Lane Configurations |      | ↑↑    | ↑     |      |      |      |      |      |      | ↑     | ↑↑    |      |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12    | 12    | 12   |
| Grade (%)           |      | 0%    |       |      | 0%   |      |      | 0%   |      |       | 0%    |      |
| Storage Length (ft) | 0    |       | 0     | 0    |      | 0    | 0    |      | 0    | 0     |       | 0    |
| Storage Lanes       | 0    |       | 1     | 0    |      | 0    | 0    |      | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50   |       |       | 50   |      |      | 50   |      |      | 50    |       |      |
| Lane Util. Factor   | 1.00 | 0.91  | 0.91  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91  | 0.91  | 1.00 |
| Ped Bike Factor     |      |       |       |      |      |      |      |      |      |       |       |      |
| Frt                 |      | 0.988 | 0.850 |      |      |      |      |      |      |       |       |      |
| Flt Protected       |      |       |       |      |      |      |      |      |      | 0.950 | 0.988 |      |
| Satd. Flow (prot)   | 0    | 3350  | 1441  | 0    | 0    | 0    | 0    | 0    | 0    | 1610  | 3350  | 0    |
| Flt Permitted       |      |       |       |      |      |      |      |      |      | 0.950 | 0.988 |      |
| Satd. Flow (perm)   | 0    | 3350  | 1441  | 0    | 0    | 0    | 0    | 0    | 0    | 1610  | 3350  | 0    |
| Right Turn on Red   |      |       | Yes   |      |      | Yes  |      |      | Yes  | Yes   | Yes   | Yes  |
| Satd. Flow (RTOR)   |      | 5     | 204   |      |      |      |      |      |      | 26    | 26    |      |
| Link Speed (mph)    |      | 35    |       |      | 35   |      |      |      | 35   |       |       | 35   |
| Link Distance (ft)  |      | 382   |       |      | 349  |      |      |      | 1378 |       |       | 278  |
| Travel Time (s)     |      | 7.4   |       |      | 6.8  |      |      |      | 26.8 |       |       | 5.4  |

**Intersection Summary**  
Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
191: I-395 SB On-Ramp & Seminary Rd (S)

AM PEAK  
10/22/2011

| Lane Group           | EBT   | EBR   | SBL   | SBT   | ø1   | ø3   | ø4   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  | ↔↔    | ↗     | ↖     | ↕     |      |      |      |
| Volume (vph)         | 890   | 500   | 225   | 240   |      |      |      |
| Turn Type            | NA    | Free  | Perm  | NA    |      |      |      |
| Protected Phases     | 2     |       | 1 3 4 | 1 3 4 | 1    | 3    | 4    |
| Permitted Phases     |       | Free  | 1 3 4 |       |      |      |      |
| Detector Phase       | 2     |       | 1 3 4 | 1 3 4 |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  | 10.0  |       |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    | 22.5  |       |       |       | 22.5 | 22.5 | 23.0 |
| Total Split (s)      | 66.5  | 0.0   | 113.5 | 113.5 | 68.0 | 22.5 | 23.0 |
| Total Split (%)      | 36.9% | 0.0%  | 63.1% | 63.1% | 38%  | 13%  | 13%  |
| Yellow Time (s)      | 4.0   |       |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     | 2.5   |       |       |       | 2.5  | 2.5  | 3.0  |
| Lost Time Adjust (s) | -2.5  | 0.0   | -2.5  | -2.5  |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             | Lag   |       |       |       | Lead | Lead | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          | Min   |       |       |       | Min  | Min  | Min  |
| Act Effct Green (s)  | 62.5  | 180.0 | 109.5 | 109.5 |      |      |      |
| Actuated g/C Ratio   | 0.35  | 1.00  | 0.61  | 0.61  |      |      |      |
| v/c Ratio            | 0.89  | 0.31  | 0.16  | 0.17  |      |      |      |
| Control Delay        | 66.2  | 0.6   | 3.5   | 15.0  |      |      |      |
| Queue Delay          | 0.0   | 0.0   | 7.3   | 0.9   |      |      |      |
| Total Delay          | 66.2  | 0.6   | 10.7  | 15.9  |      |      |      |
| LOS                  | E     | A     | B     | B     |      |      |      |
| Approach Delay       | 46.3  |       |       | 14.2  |      |      |      |
| Approach LOS         | D     |       |       | B     |      |      |      |

Intersection Summary

|   |                        |
|---|------------------------|
| Cycle Length: 180                       |                        |
| Actuated Cycle Length: 180              |                        |
| Natural Cycle: 135                      |                        |
| Control Type: Actuated-Uncoordinated    |                        |
| Maximum v/c Ratio: 0.89                 |                        |
| Intersection Signal Delay: 38.3         | Intersection LOS: D    |
| Intersection Capacity Utilization 45.4% | ICU Level of Service A |
| Analysis Period (min) 15                |                        |

Splits and Phases: 191: I-395 SB On-Ramp & Seminary Rd (S)



Updated 2035 Baseline with Recommended Improvements  
191: I-395 SB On-Ramp & Seminary Rd (S)

AM PEAK  
10/22/2011

| Lane Group              | EBT   | EBR  | SBL   | SBT   | ø1   | ø3   | ø4   |
|-------------------------|-------|------|-------|-------|------|------|------|
| Protected Phases        | 2     |      |       | 1 3 4 | 1    | 3    | 4    |
| Permitted Phases        |       | Free | 1 3 4 |       |      |      |      |
| Minimum Initial (s)     | 10.0  |      |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       | 22.5  |      |       |       | 22.5 | 22.5 | 23.0 |
| Total Split (s)         | 66.5  | 0.0  | 113.5 | 113.5 | 68.0 | 22.5 | 23.0 |
| Total Split (%)         | 36.9% | 0.0% | 63.1% | 63.1% | 38%  | 13%  | 13%  |
| Maximum Green (s)       | 60.0  |      |       |       | 61.5 | 16.0 | 16.0 |
| Yellow Time (s)         | 4.0   |      |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        | 2.5   |      |       |       | 2.5  | 2.5  | 3.0  |
| Lead/Lag                | Lag   |      |       |       | Lead | Lead | Lag  |
| Lead-Lag Optimize?      |       |      |       |       |      |      |      |
| Vehicle Extension (s)   | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Minimum Gap (s)         | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Recall Mode             | Min   |      |       |       | Min  | Min  | Min  |
| Walk Time (s)           |       |      |       |       |      |      |      |
| Flash Dont Walk (s)     |       |      |       |       |      |      |      |
| Pedestrian Calls (#/hr) |       |      |       |       |      |      |      |
| 90th %ile Green (s)     | 60.0  |      |       |       | 61.5 | 16.0 | 16.0 |
| 90th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 70th %ile Green (s)     | 60.0  |      |       |       | 61.5 | 16.0 | 16.0 |
| 70th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 50th %ile Green (s)     | 60.0  |      |       |       | 61.5 | 16.0 | 16.0 |
| 50th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 30th %ile Green (s)     | 60.0  |      |       |       | 61.5 | 16.0 | 16.0 |
| 30th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 10th %ile Green (s)     | 60.0  |      |       |       | 61.5 | 16.0 | 16.0 |
| 10th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |

Intersection Summary

|                                      |
|--------------------------------------|
| Cycle Length: 180                    |
| Actuated Cycle Length: 180           |
| Control Type: Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: 180        |
| 70th %ile Actuated Cycle: 180        |
| 50th %ile Actuated Cycle: 180        |
| 30th %ile Actuated Cycle: 180        |
| 10th %ile Actuated Cycle: 180        |

Updated 2035 Baseline with Recommended Improvements  
 192: I-395 SB On-Ramp/I-395 SB Off-Ramp & Seminary Rd (N)

AM PEAK  
 10/22/2011

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |  |
|---------------------|-------|------|------|-------|-------|------|------|------|------|------|------|------|--|
| Lane Configurations |       |      |      | ↔     | ↔     |      |      |      |      |      | ↔    | ↔    |  |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |  |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12   |  |
| Grade (%)           | 0%    |      |      | 0%    |       |      | 0%   |      |      | 0%   |      |      |  |
| Storage Length (ft) | 0     |      | 0    | 0     |       | 0    | 0    |      | 0    | 0    |      | 320  |  |
| Storage Lanes       | 0     |      | 0    | 1     |       | 0    | 0    |      | 0    | 0    |      | 1    |  |
| Taper Length (ft)   | 50    |      | 50   |       |       | 50   |      |      | 50   |      |      |      |  |
| Lane Util. Factor   | 1.00  | 1.00 | 1.00 | 0.91  | 0.91  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |  |
| Ped Bike Factor     |       |      |      |       |       |      |      |      |      |      |      |      |  |
| Frt                 | 0.850 |      |      |       |       |      |      |      |      |      |      |      |  |
| Flt Protected       |       |      |      | 0.950 | 0.998 |      |      |      |      |      |      |      |  |
| Satd. Flow (prot)   | 0     | 0    | 0    | 1610  | 3383  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583 |  |
| Flt Permitted       |       |      |      | 0.950 | 0.998 |      |      |      |      |      |      |      |  |
| Satd. Flow (perm)   | 0     | 0    | 0    | 1610  | 3383  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583 |  |
| Right Turn on Red   |       |      |      | Yes   | Yes   | Yes  |      |      |      | Yes  |      |      |  |
| Satd. Flow (RTOR)   |       |      |      | 46    | 8     |      |      |      |      |      |      |      |  |
| Link Speed (mph)    |       |      |      | 30    | 35    |      |      |      | 35   |      |      |      |  |
| Link Distance (ft)  |       |      |      | 333   | 172   |      |      |      | 278  |      |      |      |  |
| Travel Time (s)     |       |      |      | 7.6   | 3.4   |      |      |      | 5.4  |      |      |      |  |

Intersection Summary

Area Type: Other

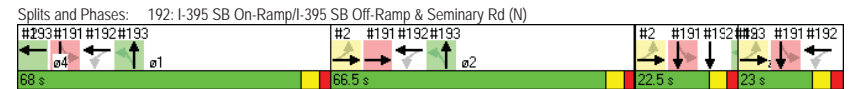
Updated 2035 Baseline with Recommended Improvements  
 192: I-395 SB On-Ramp/I-395 SB Off-Ramp & Seminary Rd (N)

AM PEAK  
 10/22/2011

| Lane Group           | WBL   | WBT   | SBT   | SBR   | ø1   | ø2   | ø4   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     |      |      |      |
| Volume (vph)         | 240   | 760   | 225   | 595   |      |      |      |
| Turn Type            | Perm  | NA    | NA    | Free  |      |      |      |
| Protected Phases     | 1 2 4 |       |       | 3     | 1    | 2    | 4    |
| Permitted Phases     | 1 2 4 | 1 2 4 |       | 3     | Free |      |      |
| Detector Phase       | 1 2 4 | 1 2 4 | 3     |       |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  | 10.0  |       |       | 10.0  | 10.0 | 10.0 |      |
| Minimum Split (s)    | 22.5  |       |       | 22.5  | 22.5 | 23.0 |      |
| Total Split (s)      | 157.5 | 157.5 | 22.5  | 0.0   | 68.0 | 66.5 | 23.0 |
| Total Split (%)      | 87.5% | 87.5% | 12.5% | 0.0%  | 38%  | 37%  | 13%  |
| Yellow Time (s)      | 4.0   |       |       | 4.0   | 4.0  | 4.0  |      |
| All-Red Time (s)     | 2.5   |       |       | 2.5   | 2.5  | 3.0  |      |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | 0.0   |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             | Lead  |       |       | Lead  | Lag  | Lag  |      |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          | Min   |       |       | Min   | Min  | Min  |      |
| Act Effct Green (s)  | 153.5 | 153.5 | 18.5  | 180.0 |      |      |      |
| Actuated g/C Ratio   | 0.85  | 0.85  | 0.10  | 1.00  |      |      |      |
| v/c Ratio            | 0.17  | 0.29  | 0.66  | 0.40  |      |      |      |
| Control Delay        | 4.3   | 0.3   | 87.4  | 0.8   |      |      |      |
| Queue Delay          | 0.0   | 2.2   | 0.0   | 0.0   |      |      |      |
| Total Delay          | 4.3   | 2.4   | 87.4  | 0.8   |      |      |      |
| LOS                  | A     | A     | F     | A     |      |      |      |
| Approach Delay       | 2.8   |       | 24.5  |       |      |      |      |
| Approach LOS         | A     |       | C     |       |      |      |      |

Intersection Summary


Cycle Length: 180  
 Actuated Cycle Length: 180  
 Natural Cycle Length: 135  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.89  
 Intersection Signal Delay: 12.6  
 Intersection Capacity Utilization 44.9%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service A





Updated 2035 Baseline with Recommended Improvements  
 192: I-395 SB On-Ramp/I-395 SB Off-Ramp & Seminary Rd (N)

AM PEAK  
 10/22/2011




| Lane Group              | WBL   | WBT   | SBT   | SBR  | ø1   | ø2   | ø4   |
|-------------------------|-------|-------|-------|------|------|------|------|
| Protected Phases        |       | 1 2 4 | 3     |      | 1    | 2    | 4    |
| Permitted Phases        | 1 2 4 |       |       | Free |      |      |      |
| Minimum Initial (s)     |       |       | 10.0  |      | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       |       |       | 22.5  |      | 22.5 | 22.5 | 23.0 |
| Total Split (s)         | 157.5 | 157.5 | 22.5  | 0.0  | 68.0 | 66.5 | 23.0 |
| Total Split (%)         | 87.5% | 87.5% | 12.5% | 0.0% | 38%  | 37%  | 13%  |
| Maximum Green (s)       |       |       | 16.0  |      | 61.5 | 60.0 | 16.0 |
| Yellow Time (s)         |       |       | 4.0   |      | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        |       |       | 2.5   |      | 2.5  | 2.5  | 3.0  |
| Lead/Lag                |       |       | Lead  |      | Lead | Lag  | Lag  |
| Lead-Lag Optimize?      |       |       |       |      |      |      |      |
| Vehicle Extension (s)   |       |       | 3.0   |      | 5.0  | 3.0  | 3.0  |
| Minimum Gap (s)         |       |       | 3.0   |      | 5.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  |       |       | 0.0   |      | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      |       |       | 0.0   |      | 0.0  | 0.0  | 0.0  |
| Recall Mode             |       |       | Min   |      | Min  | Min  | Min  |
| Walk Time (s)           |       |       |       |      |      |      |      |
| Flash Dont Walk (s)     |       |       |       |      |      |      |      |
| Pedestrian Calls (#/hr) |       |       |       |      |      |      |      |
| 90th %ile Green (s)     |       |       | 16.0  |      | 61.5 | 60.0 | 16.0 |
| 90th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |
| 70th %ile Green (s)     |       |       | 16.0  |      | 61.5 | 60.0 | 16.0 |
| 70th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |
| 50th %ile Green (s)     |       |       | 16.0  |      | 61.5 | 60.0 | 16.0 |
| 50th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |
| 30th %ile Green (s)     |       |       | 16.0  |      | 61.5 | 60.0 | 16.0 |
| 30th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |
| 10th %ile Green (s)     |       |       | 16.0  |      | 61.5 | 60.0 | 16.0 |
| 10th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |

Intersection Summary

|                                      |
|--------------------------------------|
| Cycle Length: 180                    |
| Actuated Cycle Length: 180           |
| Control Type: Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: 180        |
| 70th %ile Actuated Cycle: 180        |
| 50th %ile Actuated Cycle: 180        |
| 30th %ile Actuated Cycle: 180        |
| 10th %ile Actuated Cycle: 180        |

Updated 2035 Baseline with Recommended Improvements  
 193: I-395 NB Off-Ramp/I-395 NB On-Ramp & Seminary Rd (N)

AM PEAK  
 10/22/2011



| Lane Group          | EBL  | EBT  | EBR  | WBL  | WBT  | WBR   | NBL  | NBT   | NBR  | SBL   | SBT  | SBR  |
|---------------------|------|------|------|------|------|-------|------|-------|------|-------|------|------|
| Lane Configurations |      |      |      |      | ↑↑   | ↑↑    | ↑↑   | ↑↑    |      |       |      |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12   | 12   | 12   | 12    | 12   | 12    | 12   | 12    | 12   | 12   |
| Grade (%)           |      | 0%   |      |      | 0%   |       |      | 0%    |      |       | 0%   |      |
| Storage Length (ft) |      | 0    |      | 0    |      | 125   |      | 0     |      | 0     |      | 0    |
| Storage Lanes       |      | 0    |      | 0    |      | 1     |      | 1     |      | 0     |      | 0    |
| Taper Length (ft)   |      | 50   |      | 50   |      |       |      | 50    |      | 50    |      |      |
| Lane Util. Factor   | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00  | 0.91 | 0.91  | 1.00 | 1.00  | 1.00 | 1.00 |
| Ped Bike Factor     |      |      |      |      |      |       |      |       |      |       |      |      |
| Frt                 |      |      |      |      |      | 0.850 |      |       |      |       |      |      |
| Flt Protected       |      |      |      |      |      |       |      | 0.950 |      | 0.986 |      |      |
| Satd. Flow (prot)   | 0    | 0    | 0    | 0    | 3539 | 1583  |      | 1610  |      | 3343  | 0    | 0    |
| Flt Permitted       |      |      |      |      |      |       |      | 0.950 |      | 0.986 |      |      |
| Satd. Flow (perm)   | 0    | 0    | 0    | 0    | 3539 | 1583  |      | 1610  |      | 3343  | 0    | 0    |
| Right Turn on Red   |      |      | Yes  |      |      | Yes   |      | Yes   |      | Yes   |      | Yes  |
| Satd. Flow (RTOR)   |      |      |      |      |      |       |      | 339   |      | 33    |      |      |
| Link Speed (mph)    |      | 35   |      |      | 35   |       |      |       |      | 35    |      | 35   |
| Link Distance (ft)  |      | 135  |      |      | 238  |       |      |       |      | 294   |      | 1353 |
| Travel Time (s)     |      | 2.6  |      |      | 4.6  |       |      |       |      | 5.7   |      | 26.4 |

Intersection Summary

Area Type: Other

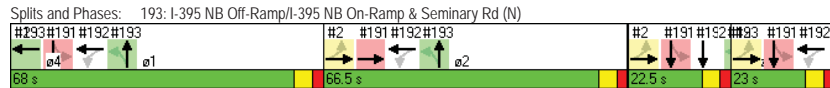
Updated 2035 Baseline with Recommended Improvements  
193: I-395 NB Off-Ramp/I-395 NB On-Ramp & Seminary Rd (N)

AM PEAK  
10/22/2011

| Lane Group           | WBT   | WBR   | NBL   | NBT   | ø1   | ø2   | ø3   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  | ↑↑    | ↑     | ↑     | ↑↑    |      |      |      |
| Volume (vph)         | 255   | 695   | 965   | 890   |      |      |      |
| Turn Type            | NA    | Free  | Perm  | NA    |      |      |      |
| Protected Phases     | 4     |       | 1 2 3 | 1 2 3 | 1    | 2    | 3    |
| Permitted Phases     |       | Free  | 1 2 3 |       |      |      |      |
| Detector Phase       | 4     |       | 1 2 3 | 1 2 3 |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  | 10.0  |       |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    | 23.0  |       |       |       | 22.5 | 22.5 | 22.5 |
| Total Split (s)      | 23.0  | 0.0   | 157.0 | 157.0 | 68.0 | 66.5 | 22.5 |
| Total Split (%)      | 12.8% | 0.0%  | 87.2% | 87.2% | 38%  | 37%  | 13%  |
| Yellow Time (s)      | 4.0   |       |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     | 3.0   |       |       |       | 2.5  | 2.5  | 2.5  |
| Lost Time Adjust (s) | -3.0  | 0.0   | -2.5  | -2.5  |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             | Lag   |       |       |       | Lead | Lag  | Lead |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          | Min   |       |       |       | Min  | Min  | Min  |
| Act Effct Green (s)  | 19.0  | 180.0 | 153.0 | 153.0 |      |      |      |
| Actuated g/C Ratio   | 0.11  | 1.00  | 0.85  | 0.85  |      |      |      |
| v/c Ratio            | 0.73  | 0.47  | 0.48  | 0.47  |      |      |      |
| Control Delay        | 90.4  | 1.0   | 10.7  | 9.0   |      |      |      |
| Queue Delay          | 0.9   | 0.0   | 34.0  | 0.7   |      |      |      |
| Total Delay          | 91.4  | 1.0   | 44.6  | 9.6   |      |      |      |
| LOS                  | F     | A     | D     | A     |      |      |      |
| Approach Delay       | 25.3  |       |       | 21.1  |      |      |      |
| Approach LOS         | C     |       |       | C     |      |      |      |

Intersection Summary

|  |                        |
|--|------------------------|
| Cycle Length: 180                        |                        |
| Actuated Cycle Length: 180               |                        |
| Natural Cycle: 135                       |                        |
| Control Type: Actuated-Uncoordinated     |                        |
| Maximum v/c Ratio: 0.89                  |                        |
| Intersection Signal Delay: 22.5          | Intersection LOS: C    |
| Intersection Capacity Utilization 100.5% | ICU Level of Service G |
| Analysis Period (min) 15                 |                        |



Updated 2035 Baseline with Recommended Improvements  
193: I-395 NB Off-Ramp/I-395 NB On-Ramp & Seminary Rd (N)

AM PEAK  
10/22/2011

| Lane Group              | WBT   | WBR  | NBL   | NBT   | ø1   | ø2   | ø3   |
|-------------------------|-------|------|-------|-------|------|------|------|
| Protected Phases        | 4     |      |       | 1 2 3 | 1    | 2    | 3    |
| Permitted Phases        |       | Free | 1 2 3 |       |      |      |      |
| Minimum Initial (s)     | 10.0  |      |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       | 23.0  |      |       |       | 22.5 | 22.5 | 22.5 |
| Total Split (s)         | 23.0  | 0.0  | 157.0 | 157.0 | 68.0 | 66.5 | 22.5 |
| Total Split (%)         | 12.8% | 0.0% | 87.2% | 87.2% | 38%  | 37%  | 13%  |
| Maximum Green (s)       | 16.0  |      |       |       | 61.5 | 60.0 | 16.0 |
| Yellow Time (s)         | 4.0   |      |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        | 3.0   |      |       |       | 2.5  | 2.5  | 2.5  |
| Lead/Lag                | Lag   |      |       |       | Lead | Lag  | Lead |
| Lead-Lag Optimize?      |       |      |       |       |      |      |      |
| Vehicle Extension (s)   | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Minimum Gap (s)         | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Recall Mode             | Min   |      |       |       | Min  | Min  | Min  |
| Walk Time (s)           |       |      |       |       |      |      |      |
| Flash Dont Walk (s)     |       |      |       |       |      |      |      |
| Pedestrian Calls (#/hr) |       |      |       |       |      |      |      |
| 90th %ile Green (s)     | 16.0  |      |       |       | 61.5 | 60.0 | 16.0 |
| 90th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 70th %ile Green (s)     | 16.0  |      |       |       | 61.5 | 60.0 | 16.0 |
| 70th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 50th %ile Green (s)     | 16.0  |      |       |       | 61.5 | 60.0 | 16.0 |
| 50th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 30th %ile Green (s)     | 16.0  |      |       |       | 61.5 | 60.0 | 16.0 |
| 30th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 10th %ile Green (s)     | 16.0  |      |       |       | 61.5 | 60.0 | 16.0 |
| 10th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |

Intersection Summary

|                                      |
|--------------------------------------|
| Cycle Length: 180                    |
| Actuated Cycle Length: 180           |
| Control Type: Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: 180        |
| 70th %ile Actuated Cycle: 180        |
| 50th %ile Actuated Cycle: 180        |
| 30th %ile Actuated Cycle: 180        |
| 10th %ile Actuated Cycle: 180        |

Updated 2035 Baseline with Recommended Improvements  
1: N Pickett St/N Pickett St/Fire Station & Seminary Rd

PM PEAK  
10/22/2011

| Lane Group          | EBL  | EBT  | EBR  | WBL  | WBT   | WBR  | NBL  | NBT  | NBR   | SBL   | SBT  | SBR  |  |
|---------------------|------|------|------|------|-------|------|------|------|-------|-------|------|------|--|
| Lane Configurations |      | ↔    |      | ↔    | ↔     |      |      | ↔    | ↔     |       | ↔    |      |  |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 |  |
| Lane Width (ft)     | 12   | 12   | 12   | 12   | 12    | 12   | 12   | 12   | 12    | 12    | 12   | 12   |  |
| Grade (%)           | 0%   |      | 0%   |      | 0%    |      | 0%   |      | 0%    |       | 0%   |      |  |
| Storage Length (ft) | 0    |      | 0    | 0    |       | 0    | 0    |      | 50    | 0     |      | 0    |  |
| Storage Lanes       | 0    |      | 0    | 0    |       | 0    | 0    |      | 1     | 0     |      | 0    |  |
| Taper Length (ft)   | 50   |      |      | 50   |       |      | 50   |      |       | 50    |      |      |  |
| Lane Util. Factor   | 0.95 | 0.95 | 0.95 | 0.95 | 0.95  | 0.95 | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 |  |
| Ped Bike Factor     |      |      |      |      |       |      |      |      | 0.98  |       |      |      |  |
| Frt                 |      |      |      |      |       |      |      |      | 0.986 |       |      |      |  |
| Frt Protected       |      |      |      |      | 0.994 |      |      |      |       | 0.950 |      |      |  |
| Satd. Flow (prot)   | 0    | 3490 | 0    | 0    | 3518  | 0    | 0    | 1770 | 1583  | 0     | 1863 | 0    |  |
| Frt Permitted       |      |      |      |      | 0.483 |      |      |      |       | 0.950 |      |      |  |
| Satd. Flow (perm)   | 0    | 3490 | 0    | 0    | 1709  | 0    | 0    | 1770 | 1553  | 0     | 1863 | 0    |  |
| Right Turn on Red   |      |      | Yes  |      |       | Yes  |      |      | Yes   |       |      |      |  |
| Satd. Flow (RTOR)   |      |      | 11   |      |       |      |      |      | 59    |       |      |      |  |
| Link Speed (mph)    |      |      | 35   |      |       | 35   |      |      | 25    |       |      |      |  |
| Link Distance (ft)  |      |      | 295  |      |       | 759  |      |      | 843   |       |      |      |  |
| Travel Time (s)     |      |      | 5.7  |      |       | 14.8 |      |      | 23.0  |       |      |      |  |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
1: N Pickett St/N Pickett St/Fire Station & Seminary Rd

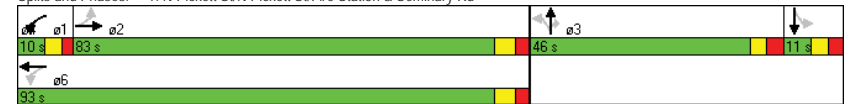
PM PEAK  
10/22/2011

| Lane Group           | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | ø4   |
|----------------------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |      |
| Volume (vph)         | 1325  | 100   | 790   | 45    | 0     | 55    |      |
| Turn Type            | NA    | pm+pt | NA    | Perm  | NA    | Perm  |      |
| Protected Phases     | 2     | 1     | 6     | 3     | 3     | 4     |      |
| Permitted Phases     | 6     |       | 3     |       | 3     |       |      |
| Detector Phase       | 2     | 1     | 6     | 3     | 3     | 3     |      |
| Switch Phase         |       |       |       |       |       |       |      |
| Minimum Initial (s)  | 10.0  | 5.0   | 10.0  | 7.0   | 7.0   | 7.0   | 5.0  |
| Minimum Split (s)    | 46.5  | 10.0  | 16.5  | 31.0  | 31.0  | 31.0  | 11.0 |
| Total Split (s)      | 83.0  | 10.0  | 93.0  | 46.0  | 46.0  | 46.0  | 11.0 |
| Total Split (%)      | 55.3% | 6.7%  | 62.0% | 30.7% | 30.7% | 30.7% | 7%   |
| Yellow Time (s)      | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| All-Red Time (s)     | 2.5   | 2.0   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0  |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      |
| Total Lost Time (s)  | 6.5   | 5.0   | 6.5   | 6.0   | 6.0   | 6.0   |      |
| Lead/Lag             | Lag   | Lead  |       | Lead  | Lead  | Lead  | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |       |       |      |
| Recall Mode          | C-Max | Max   | C-Max | None  | None  | None  | None |
| Act Effct Green (s)  | 76.5  |       | 98.0  |       | 39.5  | 39.5  |      |
| Actuated g/C Ratio   | 0.51  |       | 0.65  |       | 0.26  | 0.26  |      |
| v/c Ratio            | 0.88  |       | 0.74  |       | 0.10  | 0.13  |      |
| Control Delay        | 33.7  |       | 17.4  |       | 42.4  | 10.1  |      |
| Queue Delay          | 10.1  |       | 0.0   |       | 0.0   | 0.0   |      |
| Total Delay          | 43.8  |       | 17.4  |       | 42.4  | 10.1  |      |
| LOS                  | D     |       | B     |       | D     | B     |      |
| Approach Delay       | 43.8  |       | 17.4  |       | 24.6  |       |      |
| Approach LOS         | D     |       | B     |       | C     |       |      |

Intersection Summary

Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 107 (71%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.88  
 Intersection Signal Delay: 33.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 89.4%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 1: N Pickett St/N Pickett St/Fire Station & Seminary Rd



Updated 2035 Baseline with Recommended Improvements  
1: N Pickett St/N Pickett St/Fire Station & Seminary Rd

PM PEAK  
10/22/2011

| Lane Group              | EBT   | WBL  | WBT   | NBL   | NBT   | NBR   | ø4   |
|-------------------------|-------|------|-------|-------|-------|-------|------|
| Protected Phases        | 2     | 1    | 6     |       | 3     |       | 4    |
| Permitted Phases        |       | 6    |       | 3     |       | 3     |      |
| Minimum Initial (s)     | 10.0  | 5.0  | 10.0  | 7.0   | 7.0   | 7.0   | 5.0  |
| Minimum Split (s)       | 46.5  | 10.0 | 16.5  | 31.0  | 31.0  | 31.0  | 11.0 |
| Total Split (s)         | 83.0  | 10.0 | 93.0  | 46.0  | 46.0  | 46.0  | 11.0 |
| Total Split (%)         | 55.3% | 6.7% | 62.0% | 30.7% | 30.7% | 30.7% | 7%   |
| Maximum Green (s)       | 76.5  | 5.0  | 86.5  | 40.0  | 40.0  | 40.0  | 5.0  |
| Yellow Time (s)         | 4.0   | 3.0  | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| All-Red Time (s)        | 2.5   | 2.0  | 2.5   | 3.0   | 3.0   | 3.0   | 3.0  |
| Lead/Lag                | Lag   | Lead |       | Lead  | Lead  | Lead  | Lag  |
| Lead-Lag Optimize?      |       |      |       |       |       |       |      |
| Vehicle Extension (s)   | 4.0   | 4.0  | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| Minimum Gap (s)         | 4.0   | 4.0  | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| Time Before Reduce (s)  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Time To Reduce (s)      | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Recall Mode             | C-Max | Max  | C-Max | None  | None  | None  | None |
| Walk Time (s)           | 22.0  |      |       | 7.0   | 7.0   | 7.0   |      |
| Flash Dont Walk (s)     | 18.0  |      |       | 18.0  | 18.0  | 18.0  |      |
| Pedestrian Calls (#/hr) | 0     |      |       | 0     | 0     | 0     |      |
| 90th %ile Green (s)     | 76.5  | 16.0 | 97.5  | 40.0  | 40.0  | 40.0  | 0.0  |
| 90th %ile Term Code     | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |
| 70th %ile Green (s)     | 76.5  | 16.0 | 97.5  | 40.0  | 40.0  | 40.0  | 0.0  |
| 70th %ile Term Code     | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |
| 50th %ile Green (s)     | 76.5  | 16.0 | 97.5  | 40.0  | 40.0  | 40.0  | 0.0  |
| 50th %ile Term Code     | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |
| 30th %ile Green (s)     | 76.5  | 16.0 | 97.5  | 40.0  | 40.0  | 40.0  | 0.0  |
| 30th %ile Term Code     | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |
| 10th %ile Green (s)     | 76.5  | 18.4 | 99.9  | 37.6  | 37.6  | 37.6  | 0.0  |
| 10th %ile Term Code     | Coord | MaxR | Coord | Gap   | Gap   | Gap   | Skip |

Intersection Summary

Cycle Length: 150  
Actuated Cycle Length: 150  
Offset: 107 (71%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  
Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
2: I-395 NB Off-Ramp & Seminary Rd (S)

PM PEAK  
10/22/2011

| Lane Group          | EBL   | EBT   | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR   | SBL  | SBT  | SBR  |
|---------------------|-------|-------|------|------|------|------|------|------|-------|------|------|------|
| Lane Configurations |       |       |      |      |      |      |      |      |       |      |      |      |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           |       | 0%    |      |      | 0%   |      |      | 0%   |       |      | 0%   |      |
| Storage Length (ft) | 0     |       | 0    | 0    |      | 0    | 0    |      | 600   | 0    |      | 0    |
| Storage Lanes       | 1     |       | 0    | 0    |      | 0    | 0    |      | 1     | 0    |      | 0    |
| Taper Length (ft)   | 50    |       |      | 50   |      |      | 50   |      |       | 50   |      |      |
| Lane Util. Factor   | 0.91  | 0.91  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00  | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor     |       |       |      |      |      |      |      |      | 0.850 |      |      |      |
| Flt Protected       | 0.950 | 0.980 |      |      |      |      |      |      | 3539  | 1583 | 0    | 0    |
| Satd. Flow (prot)   | 1610  | 3322  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583  | 0    | 0    | 0    |
| Flt Permitted       | 0.950 | 0.980 |      |      |      |      |      |      |       |      |      |      |
| Satd. Flow (perm)   | 1610  | 3322  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583  | 0    | 0    | 0    |
| Right Turn on Red   | Yes   |       | Yes  |      |      | Yes  |      |      | Yes   |      |      | Yes  |
| Satd. Flow (RTOR)   | 4     | 4     |      |      |      |      |      |      | 345   |      |      |      |
| Link Speed (mph)    |       | 35    |      |      | 35   |      |      |      | 35    |      |      | 35   |
| Link Distance (ft)  |       | 349   |      |      | 315  |      |      |      | 1292  |      |      | 294  |
| Travel Time (s)     |       | 6.8   |      |      | 6.1  |      |      |      | 25.2  |      |      | 5.7  |

Intersection Summary

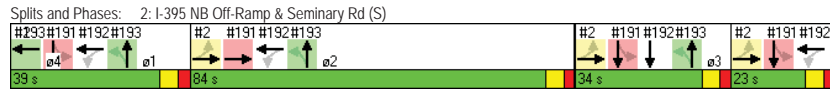
Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
2: I-395 NB Off-Ramp & Seminary Rd (S)

PM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | NBT   | NBR   | ø2   | ø3   | ø4   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  | ↔     | ↔↔    | ↕     | ↕     |      |      |      |
| Volume (vph)         | 960   | 630   | 735   | 440   |      |      |      |
| Turn Type            | Perm  | NA    | NA    | Perm  |      |      |      |
| Protected Phases     |       | 2 3 4 | 1     |       | 2    | 3    | 4    |
| Permitted Phases     | 2 3 4 |       |       | 1     |      |      |      |
| Detector Phase       | 2 3 4 | 2 3 4 | 1     | 1     |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  |       |       | 10.0  | 10.0  | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    |       |       | 22.5  | 22.5  | 22.5 | 22.5 | 23.0 |
| Total Split (s)      | 141.0 | 141.0 | 39.0  | 39.0  | 84.0 | 34.0 | 23.0 |
| Total Split (%)      | 78.3% | 78.3% | 21.7% | 21.7% | 47%  | 19%  | 13%  |
| Yellow Time (s)      |       |       | 4.0   | 4.0   | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     |       |       | 2.5   | 2.5   | 2.5  | 2.5  | 3.0  |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | -2.5  |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             |       |       | Lead  | Lead  | Lag  | Lead | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          |       |       | Min   | Min   | Min  | Min  | Min  |
| Act Effct Green (s)  | 137.0 | 137.0 | 35.0  | 35.0  |      |      |      |
| Actuated g/C Ratio   | 0.76  | 0.76  | 0.19  | 0.19  |      |      |      |
| v/c Ratio            | 0.45  | 0.46  | 1.15  | 0.81  |      |      |      |
| Control Delay        | 0.4   | 14.6  | 144.3 | 29.9  |      |      |      |
| Queue Delay          | 11.0  | 3.1   | 46.0  | 0.0   |      |      |      |
| Total Delay          | 11.5  | 17.7  | 190.4 | 29.9  |      |      |      |
| LOS                  | B     | B     | F     | C     |      |      |      |
| Approach Delay       |       | 15.7  | 130.3 |       |      |      |      |
| Approach LOS         |       | B     | F     |       |      |      |      |

| Intersection Summary               |                        |
|------------------------------------|------------------------|
| Cycle Length:                      | 180                    |
| Actuated Cycle Length:             | 180                    |
| Natural Cycle:                     | 145                    |
| Control Type:                      | Actuated-Uncoordinated |
| Maximum v/c Ratio:                 | 1.18                   |
| Intersection Signal Delay:         | 64.4                   |
| Intersection LOS:                  | E                      |
| Intersection Capacity Utilization: | 66.5%                  |
| ICU Level of Service:              | C                      |
| Analysis Period (min):             | 15                     |



Updated 2035 Baseline with Recommended Improvements  
2: I-395 NB Off-Ramp & Seminary Rd (S)

PM PEAK  
10/22/2011

| Lane Group              | EBL   | EBT   | NBT   | NBR   | ø2   | ø3   | ø4   |
|-------------------------|-------|-------|-------|-------|------|------|------|
| Protected Phases        |       | 2 3 4 | 1     |       | 2    | 3    | 4    |
| Permitted Phases        | 2 3 4 |       |       | 1     |      |      |      |
| Minimum Initial (s)     |       |       | 10.0  | 10.0  | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       |       |       | 22.5  | 22.5  | 22.5 | 22.5 | 23.0 |
| Total Split (s)         | 141.0 | 141.0 | 39.0  | 39.0  | 84.0 | 34.0 | 23.0 |
| Total Split (%)         | 78.3% | 78.3% | 21.7% | 21.7% | 47%  | 19%  | 13%  |
| Maximum Green (s)       |       |       | 32.5  | 32.5  | 77.5 | 27.5 | 16.0 |
| Yellow Time (s)         |       |       | 4.0   | 4.0   | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        |       |       | 2.5   | 2.5   | 2.5  | 2.5  | 3.0  |
| Lead/Lag                |       |       | Lead  | Lead  | Lag  | Lead | Lag  |
| Lead-Lag Optimize?      |       |       |       |       |      |      |      |
| Vehicle Extension (s)   |       |       | 5.0   | 5.0   | 3.0  | 3.0  | 3.0  |
| Minimum Gap (s)         |       |       | 5.0   | 5.0   | 3.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  |       |       | 0.0   | 0.0   | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      |       |       | 0.0   | 0.0   | 0.0  | 0.0  | 0.0  |
| Recall Mode             |       |       | Min   | Min   | Min  | Min  | Min  |
| Walk Time (s)           |       |       |       |       |      |      |      |
| Flash Dont Walk (s)     |       |       |       |       |      |      |      |
| Pedestrian Calls (#/hr) |       |       |       |       |      |      |      |
| 90th %ile Green (s)     |       |       | 32.5  | 32.5  | 77.5 | 27.5 | 16.0 |
| 90th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 70th %ile Green (s)     |       |       | 32.5  | 32.5  | 77.5 | 27.5 | 16.0 |
| 70th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 50th %ile Green (s)     |       |       | 32.5  | 32.5  | 77.5 | 27.5 | 16.0 |
| 50th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 30th %ile Green (s)     |       |       | 32.5  | 32.5  | 77.5 | 27.5 | 16.0 |
| 30th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 10th %ile Green (s)     |       |       | 32.5  | 32.5  | 77.5 | 27.5 | 16.0 |
| 10th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |

| Intersection Summary      |                        |
|---------------------------|------------------------|
| Cycle Length:             | 180                    |
| Actuated Cycle Length:    | 180                    |
| Control Type:             | Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: | 180                    |
| 70th %ile Actuated Cycle: | 180                    |
| 50th %ile Actuated Cycle: | 180                    |
| 30th %ile Actuated Cycle: | 180                    |
| 10th %ile Actuated Cycle: | 180                    |

Updated 2035 Baseline with Recommended Improvements  
 3: Seminary Rd (S)/Seminary Rd (N) & Seminary Rd

PM PEAK  
 10/22/2011

| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR   |
|---------------------|------|-------|-------|------|------|------|------|------|------|------|------|-------|
| Lane Configurations |      | ↑↑    | ↑↑    |      | ↑↑   |      |      |      |      |      |      | ↑↑    |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12    |
| Grade (%)           |      | 0%    |       |      | 0%   |      |      | 0%   |      |      | 0%   |       |
| Storage Length (ft) | 0    |       | 0     | 0    |      | 0    | 0    |      | 0    | 0    |      | 0     |
| Storage Lanes       | 0    |       | 2     | 0    |      | 0    | 0    |      | 0    | 0    |      | 2     |
| Taper Length (ft)   | 50   |       |       | 50   |      |      | 50   |      |      | 50   |      |       |
| Lane Util. Factor   | 1.00 | 0.86  | 0.86  | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88  |
| Ped Bike Factor     |      |       |       |      |      |      |      |      |      |      |      |       |
| Frt                 |      | 0.927 | 0.850 |      |      |      |      |      |      |      |      | 0.850 |
| Flt Protected       |      |       |       |      |      |      |      |      |      |      |      |       |
| Satd. Flow (prot)   | 0    | 2970  | 2723  | 0    | 3539 | 0    | 0    | 0    | 0    | 0    | 0    | 2787  |
| Flt Permitted       |      |       |       |      |      |      |      |      |      |      |      |       |
| Satd. Flow (perm)   | 0    | 2970  | 2723  | 0    | 3539 | 0    | 0    | 0    | 0    | 0    | 0    | 2787  |
| Link Speed (mph)    |      | 35    |       |      | 35   |      |      | 35   |      |      | 35   |       |
| Link Distance (ft)  |      | 358   |       |      | 849  |      |      | 315  |      |      | 399  |       |
| Travel Time (s)     |      | 7.0   |       |      | 16.5 |      |      | 6.1  |      |      | 7.8  |       |

**Intersection Summary**  
 Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
 7: Beauregard St/S Walter Reed Dr & King St

PM PEAK  
 10/22/2011

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT  | SBR   |
|---------------------|-------|-------|------|-------|-------|------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↑↑    | ↑↑    |      | ↑↑    | ↑↑    |      |       | ↑↑    | ↑↑   |       | ↑↑   | ↑↑    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12   | 12    |
| Grade (%)           |       | 0%    |      |       | 0%    |      |       | 0%    |      |       | 0%   |       |
| Storage Length (ft) | 230   |       | 0    | 225   |       | 0    | 400   |       | 0    | 160   |      | 140   |
| Storage Lanes       | 2     |       | 0    | 2     |       | 0    | 2     |       | 0    | 1     |      | 1     |
| Taper Length (ft)   | 140   |       |      | 140   |       |      | 50    |       |      | 50    |      |       |
| Lane Util. Factor   | 0.97  | 0.95  | 0.95 | 0.97  | 0.95  | 0.95 | 0.97  | 0.95  | 0.95 | 1.00  | 0.95 | 1.00  |
| Ped Bike Factor     |       | 1.00  |      |       | 1.00  |      |       | 1.00  |      |       | 1.00 | 0.98  |
| Frt                 |       | 0.979 |      |       | 0.987 |      |       | 0.972 |      |       |      | 0.850 |
| Flt Protected       | 0.950 |       |      | 0.950 |       |      | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (prot)   | 3433  | 3453  | 0    | 3433  | 3487  | 0    | 3433  | 3425  | 0    | 1770  | 3539 | 1583  |
| Flt Permitted       | 0.950 |       |      | 0.950 |       |      | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (perm)   | 3433  | 3453  | 0    | 3433  | 3487  | 0    | 3433  | 3425  | 0    | 1770  | 3539 | 1557  |
| Right Turn on Red   |       |       | Yes  |       |       | Yes  |       |       | Yes  |       |      | Yes   |
| Satd. Flow (RTOR)   |       | 19    |      |       | 10    |      |       | 20    |      |       |      | 81    |
| Link Speed (mph)    |       | 35    |      |       | 35    |      |       | 35    |      |       | 35   |       |
| Link Distance (ft)  |       | 1357  |      |       | 1477  |      |       | 1463  |      |       | 1148 |       |
| Travel Time (s)     |       | 26.4  |      |       | 28.8  |      |       | 28.5  |      |       | 22.4 |       |

**Intersection Summary**  
 Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
7: Beauregard St/S Walter Reed Dr & King St

PM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | WBL  | WBT   | NBL  | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|------|-------|------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔    | ↕     | ↔    | ↕     | ↔     | ↕     | ↕     |
| Volume (vph)         | 110   | 1395  | 95   | 1015  | 240  | 455   | 170   | 845   | 145   |
| Turn Type            | Prot  | NA    | Prot | NA    | Prot | NA    | Prot  | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5    | 2     | 7    | 4     | 3     | 8     |       |
| Permitted Phases     |       |       |      |       |      |       |       |       | 8     |
| Detector Phase       | 1     | 6     | 5    | 2     | 7    | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |      |       |      |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 10.0  | 4.0  | 10.0  | 6.5  | 7.0   | 3.5   | 7.0   | 7.0   |
| Minimum Split (s)    | 9.5   | 30.5  | 9.5  | 30.5  | 12.0 | 29.5  | 9.0   | 29.5  | 29.5  |
| Total Split (s)      | 14.3  | 68.4  | 10.4 | 64.5  | 12.0 | 32.2  | 19.0  | 39.2  | 39.2  |
| Total Split (%)      | 11.0% | 52.6% | 8.0% | 49.6% | 9.2% | 24.8% | 14.6% | 30.2% | 30.2% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0  | 4.0   | 3.0  | 3.5   | 3.0   | 3.5   | 3.5   |
| All-Red Time (s)     | 2.5   | 2.5   | 2.5  | 2.5   | 2.0  | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0  | 0.0   | -5.0 | -5.0  | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.5   | 6.5   | 5.5  | 6.5   | 0.0  | 0.5   | 5.0   | 5.5   | 5.5   |
| Lead/Lag             | Lead  | Lag   | Lead | Lag   | Lead | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |      |       |      |       |       |       |       |
| Recall Mode          | None  | Max   | None | Max   | None | C-Max | None  | C-Max | C-Max |
| Act Effct Green (s)  | 8.4   | 61.9  | 4.9  | 58.4  | 12.0 | 31.7  | 14.0  | 33.7  | 33.7  |
| Actuated g/C Ratio   | 0.06  | 0.48  | 0.04 | 0.45  | 0.09 | 0.24  | 0.11  | 0.26  | 0.26  |
| v/c Ratio            | 0.53  | 1.06  | 0.79 | 0.76  | 0.81 | 0.71  | 0.96  | 0.99  | 0.34  |
| Control Delay        | 67.8  | 71.9  | 99.6 | 33.7  | 62.3 | 39.4  | 112.6 | 75.6  | 21.0  |
| Queue Delay          | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 67.8  | 71.9  | 99.6 | 33.7  | 62.3 | 39.4  | 112.6 | 75.6  | 21.0  |
| LOS                  | E     | E     | F    | C     | E    | D     | F     | E     | C     |
| Approach Delay       |       | 71.6  |      | 38.9  |      | 46.3  |       | 74.2  |       |
| Approach LOS         |       | E     |      | D     |      | D     |       | E     |       |

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 88 (68%), Referenced to phase 4:NBT and 8:SBT, Start of Yellow  
 Natural Cycle: 145  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.06  
 Intersection Signal Delay: 60.0  
 Intersection LOS: E  
 Intersection Capacity Utilization 90.6%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 7: Beauregard St/S Walter Reed Dr & King St



Updated 2035 Baseline with Recommended Improvements  
7: Beauregard St/S Walter Reed Dr & King St

PM PEAK  
10/22/2011

| Lane Group              | EBL   | EBT   | WBL  | WBT   | NBL  | NBT   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|------|-------|------|-------|-------|-------|-------|
| Protected Phases        | 1     | 6     | 5    | 2     | 7    | 4     | 3     | 8     |       |
| Permitted Phases        |       |       |      |       |      |       |       |       | 8     |
| Minimum Initial (s)     | 4.0   | 10.0  | 4.0  | 10.0  | 6.5  | 7.0   | 3.5   | 7.0   | 7.0   |
| Minimum Split (s)       | 9.5   | 30.5  | 9.5  | 30.5  | 12.0 | 29.5  | 9.0   | 29.5  | 29.5  |
| Total Split (s)         | 14.3  | 68.4  | 10.4 | 64.5  | 12.0 | 32.2  | 19.0  | 39.2  | 39.2  |
| Total Split (%)         | 11.0% | 52.6% | 8.0% | 49.6% | 9.2% | 24.8% | 14.6% | 30.2% | 30.2% |
| Maximum Green (s)       | 8.8   | 61.9  | 4.9  | 58.0  | 7.0  | 26.7  | 14.0  | 33.7  | 33.7  |
| Yellow Time (s)         | 3.0   | 4.0   | 3.0  | 4.0   | 3.0  | 3.5   | 3.0   | 3.5   | 3.5   |
| All-Red Time (s)        | 2.5   | 2.5   | 2.5  | 2.5   | 2.0  | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead  | Lag   | Lead | Lag   | Lead | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?      |       |       |      |       |      |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0  | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | Max   | None | Max   | None | C-Max | None  | C-Max | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0  | 7.0   | 7.0  | 7.0   | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     | 17.0  | 17.0  | 17.0 | 17.0  | 17.0 | 17.0  | 17.0  | 17.0  | 17.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0    | 0     | 0    | 0     | 0     | 0     | 0     |
| 90th %ile Green (s)     | 8.8   | 61.9  | 4.9  | 58.0  | 7.0  | 26.7  | 14.0  | 33.7  | 33.7  |
| 90th %ile Term Code     | Max   | MaxR  | Max  | MaxR  | Max  | Coord | Max   | Coord | Coord |
| 70th %ile Green (s)     | 8.8   | 61.9  | 4.9  | 58.0  | 7.0  | 26.7  | 14.0  | 33.7  | 33.7  |
| 70th %ile Term Code     | Max   | MaxR  | Max  | MaxR  | Max  | Coord | Max   | Coord | Coord |
| 50th %ile Green (s)     | 8.8   | 61.9  | 4.9  | 58.0  | 7.0  | 26.7  | 14.0  | 33.7  | 33.7  |
| 50th %ile Term Code     | Max   | MaxR  | Max  | MaxR  | Max  | Coord | Max   | Coord | Coord |
| 30th %ile Green (s)     | 8.7   | 61.9  | 4.9  | 58.1  | 7.0  | 26.7  | 14.0  | 33.7  | 33.7  |
| 30th %ile Term Code     | Gap   | MaxR  | Max  | MaxR  | Max  | Coord | Max   | Coord | Coord |
| 10th %ile Green (s)     | 7.1   | 61.9  | 4.9  | 59.7  | 7.0  | 26.7  | 14.0  | 33.7  | 33.7  |
| 10th %ile Term Code     | Gap   | MaxR  | Max  | MaxR  | Max  | Coord | Max   | Coord | Coord |

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 88 (68%), Referenced to phase 4:NBT and 8:SBT, Start of Yellow  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
9: Beauregard St & Braddock Rd

PM PEAK  
10/22/2011

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT  | WBR   | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|-------|------|-------|------|-------|-------|------|-------|-------|-------|------|
| Lane Configurations | ↔     | ↕     | ↔    | ↔     | ↕    | ↕     | ↔     | ↕    | ↕     | ↔     | ↕     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           |       | -6%   |      |       | -4%  |       |       | -2%  |       |       | 2%    |      |
| Storage Length (ft) | 100   |       | 0    | 200   |      | 60    | 80    |      | 100   | 250   |       | 0    |
| Storage Lanes       | 1     |       | 0    | 1     |      | 1     | 1     |      | 1     | 1     |       | 0    |
| Taper Length (ft)   | 50    |       |      | 50    |      |       | 50    |      |       | 50    |       |      |
| Lane Util. Factor   | 1.00  | 0.95  | 0.95 | 1.00  | 0.95 | 1.00  | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 0.95 |
| Ped Bike Factor     |       |       |      |       |      |       |       |      |       |       | 1.00  |      |
| Frt                 |       | 0.972 |      |       |      | 0.850 |       |      | 0.850 |       | 0.987 |      |
| Flt Protected       | 0.950 |       |      | 0.950 |      |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (prot)   | 1823  | 3543  | 0    | 1805  | 3610 | 1615  | 1787  | 3575 | 1599  | 1752  | 3444  | 0    |
| Flt Permitted       | 0.695 |       |      | 0.490 |      |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (perm)   | 1333  | 3543  | 0    | 931   | 3610 | 1615  | 1787  | 3575 | 1599  | 1752  | 3444  | 0    |
| Right Turn on Red   |       |       | Yes  |       |      | Yes   |       |      | Yes   |       |       | Yes  |
| Satd. Flow (RTOR)   |       | 18    |      |       |      | 280   |       |      | 121   |       | 14    |      |
| Link Speed (mph)    |       | 35    |      |       | 35   |       |       | 35   |       |       | 35    |      |
| Link Distance (ft)  |       | 755   |      |       | 1885 |       |       | 1146 |       |       | 1463  |      |
| Travel Time (s)     |       | 14.7  |      |       | 36.7 |       |       | 22.3 |       |       | 28.5  |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
9: Beauregard St & Braddock Rd

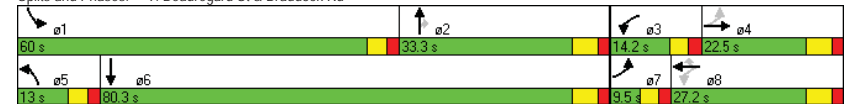
PM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↕     | ↔     | ↕     | ↕     | ↔     | ↕     |
| Volume (vph)         | 35    | 110   | 140   | 85    | 260   | 45    | 495   | 180   | 490   | 615   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 7     | 4     | 3     | 8     |       | 5     | 2     |       | 1     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 8     |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 7.0   | 4.0   | 4.0   | 4.0   | 6.0   | 10.0  | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)    | 9.5   | 22.5  | 9.5   | 22.0  | 22.0  | 11.0  | 26.0  | 26.0  | 11.0  | 26.0  |
| Total Split (s)      | 9.5   | 22.5  | 14.2  | 27.2  | 27.2  | 13.0  | 33.3  | 33.3  | 60.0  | 80.3  |
| Total Split (%)      | 7.3%  | 17.3% | 10.9% | 20.9% | 20.9% | 10.0% | 25.6% | 25.6% | 46.2% | 61.8% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | -2.5  | 0.0   | -1.0  | -2.0  | 0.0   | -1.0  | -2.0  |
| Total Lost Time (s)  | 2.5   | 3.5   | 2.5   | 3.5   | 6.0   | 4.0   | 6.0   | 4.0   | 4.0   | 6.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       | C-Max | C-Max | None  | C-Max |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |
| Act Effct Green (s)  | 20.6  | 12.6  | 27.8  | 19.2  | 16.7  | 8.5   | 45.5  | 43.5  | 46.2  | 85.4  |
| Actuated g/C Ratio   | 0.16  | 0.10  | 0.21  | 0.15  | 0.13  | 0.07  | 0.35  | 0.36  | 0.36  | 0.66  |
| v/c Ratio            | 0.16  | 0.40  | 0.54  | 0.17  | 0.62  | 0.41  | 0.43  | 0.31  | 0.85  | 0.32  |
| Control Delay        | 41.5  | 50.8  | 51.0  | 49.4  | 12.1  | 73.2  | 29.9  | 14.8  | 20.1  | 4.2   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 41.5  | 50.8  | 51.0  | 49.4  | 12.1  | 73.2  | 29.9  | 14.8  | 20.1  | 4.2   |
| LOS                  | D     | D     | D     | D     | B     | E     | C     | B     | C     | A     |
| Approach Delay       |       | 48.9  |       | 29.9  |       |       | 28.8  |       |       | 10.9  |
| Approach LOS         |       | D     |       | C     |       |       | C     |       |       | B     |

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 9 (7%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 22.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 67.8%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 9: Beauregard St & Braddock Rd





Updated 2035 Baseline with Recommended Improvements  
9: Beaugard St & Braddock Rd

PM PEAK  
10/22/2011

| Lane Group              | EBL  | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 7    | 4     | 3     | 8     |       | 5     | 2     |       | 1     | 6     |
| Permitted Phases        | 4    |       | 8     |       | 8     |       |       | 2     |       |       |
| Minimum Initial (s)     | 4.0  | 7.0   | 4.0   | 4.0   | 4.0   | 6.0   | 10.0  | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)       | 9.5  | 22.5  | 9.5   | 22.0  | 22.0  | 11.0  | 26.0  | 26.0  | 11.0  | 26.0  |
| Total Split (s)         | 9.5  | 22.5  | 14.2  | 27.2  | 27.2  | 13.0  | 33.3  | 33.3  | 6.0   | 80.3  |
| Total Split (%)         | 7.3% | 17.3% | 10.9% | 20.9% | 20.9% | 10.0% | 25.6% | 25.6% | 46.2% | 61.8% |
| Maximum Green (s)       | 4.5  | 16.5  | 9.2   | 21.2  | 21.2  | 8.0   | 27.3  | 27.3  | 55.0  | 74.3  |
| Yellow Time (s)         | 3.0  | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 2.0  | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |      |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0  | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 0.2   | 0.2   | 3.0   | 0.2   |
| Minimum Gap (s)         | 3.0  | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 0.2   | 0.2   | 3.0   | 0.2   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |
| Walk Time (s)           | 4.0  |       | 5.0   | 5.0   |       | 7.0   | 7.0   |       | 7.0   |       |
| Flash Dont Walk (s)     |      | 12.0  |       | 11.0  | 11.0  |       | 13.0  | 13.0  |       | 13.0  |
| Pedestrian Calls (#/hr) |      | 5     |       | 0     | 0     |       | 5     | 5     |       | 5     |
| 90th %ile Green (s)     | 4.5  | 16.0  | 9.2   | 20.7  | 20.7  | 8.0   | 27.8  | 27.8  | 55.0  | 74.8  |
| 90th %ile Term Code     | Max  | Ped   | Max   | Hold  | Hold  | Max   | Coord | Coord | Max   | Coord |
| 70th %ile Green (s)     | 4.5  | 10.3  | 9.2   | 15.0  | 15.0  | 8.0   | 38.5  | 38.5  | 50.0  | 80.5  |
| 70th %ile Term Code     | Max  | Gap   | Max   | Hold  | Hold  | Max   | Coord | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 4.5  | 9.1   | 9.2   | 13.8  | 13.8  | 8.0   | 43.9  | 43.9  | 45.8  | 81.7  |
| 50th %ile Term Code     | Max  | Gap   | Max   | Hold  | Hold  | Max   | Coord | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 4.5  | 7.9   | 9.2   | 12.6  | 12.6  | 7.6   | 49.7  | 49.7  | 41.2  | 83.3  |
| 30th %ile Term Code     | Max  | Gap   | Max   | Hold  | Hold  | Gap   | Coord | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 0.0  | 7.0   | 9.2   | 21.2  | 21.2  | 0.0   | 57.6  | 57.6  | 34.2  | 96.8  |
| 10th %ile Term Code     | Skip | Min   | Max   | Hold  | Hold  | Skip  | Coord | Coord | Gap   | Coord |

Intersection Summary

Cycle Length: 130  
Actuated Cycle Length: 130  
Offset: 9 (7%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
10: Beaugard St & Fillmore Ave

PM PEAK  
10/22/2011

| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|---------------------|------|-------|-------|------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations |      | ↕     | ↕     |      | ↕     |      | ↕     | ↕     |      | ↕     | ↕     | ↕    |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           |      | -3%   |       |      | -3%   |      |       | -4%   |      |       | 3%    |      |
| Storage Length (ft) | 0    |       | 150   | 0    |       | 0    | 200   |       | 0    | 75    |       | 0    |
| Storage Lanes       | 0    |       | 1     | 0    |       | 0    | 1     |       | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50   |       |       | 50   |       |      | 50    |       |      | 50    |       |      |
| 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     |      | 0.98  |       |      | 1.00  |      |       | 1.00  |      |       | 1.00  |      |
| Frt                 |      |       | 0.850 |      | 0.958 |      |       | 0.991 |      |       | 0.991 |      |
| Flt Protected       |      | 0.956 |       |      | 0.972 |      | 0.950 |       |      | 0.950 |       |      |
| Satd. Flow (prot)   | 0    | 1807  | 1607  | 0    | 1752  | 0    | 1805  | 3572  | 0    | 1743  | 3443  | 0    |
| Flt Permitted       |      | 0.758 |       |      | 0.805 |      | 0.950 |       |      | 0.950 |       |      |
| Satd. Flow (perm)   | 0    | 1433  | 1579  | 0    | 1451  | 0    | 1805  | 3572  | 0    | 1743  | 3443  | 0    |
| Right Turn on Red   |      |       | Yes   |      |       | Yes  |       |       | Yes  |       |       | Yes  |
| Satd. Flow (RTOR)   |      |       | 15    |      | 32    |      |       | 10    |      | 9     |       |      |
| Link Speed (mph)    |      | 25    |       |      | 25    |      |       | 35    |      | 35    |       |      |
| Link Distance (ft)  |      | 778   |       |      | 309   |      |       | 1416  |      | 1146  |       |      |
| Travel Time (s)     |      | 21.2  |       |      | 8.4   |      |       | 27.6  |      | 22.3  |       |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
10: Beauregard St & Fillmore Ave

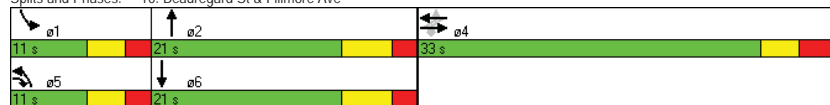
PM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       | ↕     | ↕     |       | ↕     | ↕     | ↕     | ↕     | ↕     |
| Volume (vph)         | 60    | 5     | 80    | 55    | 10    | 45    | 630   | 20    | 715   |
| Turn Type            | Perm  | NA    | pm+ov | Perm  | NA    | Prot  | NA    | Prot  | NA    |
| Protected Phases     |       | 4     | 5     |       | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       |       | 4     |       |       |       |       |       |
| Detector Phase       | 4     | 4     | 5     | 4     | 4     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 14.0  | 14.0  | 6.0   | 14.0  | 14.0  | 6.0   | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)    | 33.0  | 33.0  | 11.0  | 33.0  | 33.0  | 11.0  | 16.0  | 11.0  | 16.0  |
| Total Split (s)      | 33.0  | 33.0  | 11.0  | 33.0  | 33.0  | 11.0  | 21.0  | 11.0  | 21.0  |
| Total Split (%)      | 50.8% | 50.8% | 16.9% | 50.8% | 50.8% | 16.9% | 32.3% | 16.9% | 32.3% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.0  | -2.0  | -1.0  | -2.0  | -2.0  | -1.0  | -2.0  | -1.0  | -2.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             |       |       | Lead  |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |       |
| Act Effct Green (s)  | 18.6  | 22.4  |       | 18.6  | 7.0   | 41.0  | 7.0   | 34.4  |       |
| Actuated g/C Ratio   | 0.29  | 0.34  |       | 0.29  | 0.11  | 0.63  | 0.11  | 0.53  |       |
| v/c Ratio            | 0.17  | 0.15  |       | 0.23  | 0.25  | 0.32  | 0.12  | 0.45  |       |
| Control Delay        | 16.9  | 8.4   |       | 13.0  | 30.1  | 10.4  | 34.1  | 12.4  |       |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Total Delay          | 16.9  | 8.4   |       | 13.0  | 30.1  | 10.4  | 34.1  | 12.4  |       |
| LOS                  | B     | A     |       | B     | C     | B     | C     | B     |       |
| Approach Delay       | 12.3  |       |       | 13.0  |       | 11.7  |       | 13.0  |       |
| Approach LOS         | B     |       |       | B     |       | B     |       | B     |       |

Intersection Summary

Cycle Length: 65  
 Actuated Cycle Length: 65  
 Offset: 64 (98%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.45  
 Intersection Signal Delay: 12.4  
 Intersection LOS: B  
 Intersection Capacity Utilization 50.5%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 10: Beauregard St & Fillmore Ave



Updated 2035 Baseline with Recommended Improvements  
10: Beauregard St & Fillmore Ave

PM PEAK  
10/22/2011

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 4     | 5     |       | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases        | 4     |       |       | 4     |       |       |       |       |       |
| Minimum Initial (s)     | 14.0  | 14.0  | 6.0   | 14.0  | 14.0  | 6.0   | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)       | 33.0  | 33.0  | 11.0  | 33.0  | 33.0  | 11.0  | 16.0  | 11.0  | 16.0  |
| Total Split (s)         | 33.0  | 33.0  | 11.0  | 33.0  | 33.0  | 11.0  | 21.0  | 11.0  | 21.0  |
| Total Split (%)         | 50.8% | 50.8% | 16.9% | 50.8% | 50.8% | 16.9% | 32.3% | 16.9% | 32.3% |
| Maximum Green (s)       | 27.0  | 27.0  | 6.0   | 27.0  | 27.0  | 6.0   | 15.0  | 6.0   | 15.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       | Lead  |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.2   | 2.0   | 0.2   |
| Minimum Gap (s)         | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.2   | 2.0   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Walk Time (s)           | 4.0   | 4.0   |       | 4.0   | 4.0   |       |       |       |       |
| Flash Dont Walk (s)     | 23.0  | 23.0  |       | 23.0  | 23.0  |       |       |       |       |
| Pedestrian Calls (#/hr) | 5     | 5     |       | 5     | 5     |       |       |       |       |
| 90th %ile Green (s)     | 27.0  | 27.0  | 6.0   | 27.0  | 27.0  | 6.0   | 15.0  | 6.0   | 15.0  |
| 90th %ile Term Code     | Ped   | Ped   | Max   | Ped   | Ped   | Max   | Coord | Max   | Coord |
| 70th %ile Green (s)     | 14.0  | 14.0  | 6.0   | 14.0  | 14.0  | 6.0   | 39.0  | 0.0   | 28.0  |
| 70th %ile Term Code     | Min   | Min   | Max   | Min   | Min   | Max   | Coord | Skip  | Coord |
| 50th %ile Green (s)     | 14.0  | 14.0  | 6.0   | 14.0  | 14.0  | 6.0   | 39.0  | 0.0   | 28.0  |
| 50th %ile Term Code     | Min   | Min   | Max   | Min   | Min   | Max   | Coord | Skip  | Coord |
| 30th %ile Green (s)     | 14.0  | 14.0  | 6.0   | 14.0  | 14.0  | 6.0   | 39.0  | 0.0   | 28.0  |
| 30th %ile Term Code     | Min   | Min   | Max   | Min   | Min   | Max   | Coord | Skip  | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 59.0  | 0.0   | 59.0  |
| 10th %ile Term Code     | Skip  | Skip  | Skip  | Skip  | Skip  | Skip  | Coord | Skip  | Coord |

Intersection Summary

Cycle Length: 65  
 Actuated Cycle Length: 65  
 Offset: 64 (98%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
 11: Mark Center Dr/Mark Center Dr/ Southern Towers & Seminary Rd

PM PEAK  
 10/22/2011

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT  | WBR   | NBL   | NBT   | NBR   | SBL   | SBT  | SBR   |
|---------------------|-------|------|-------|-------|------|-------|-------|-------|-------|-------|------|-------|
| Lane Configurations | ↔     | ↔↔↔  | ↔     | ↔     | ↔↔↔  | ↔     | ↔     | ↔     | ↔↔    | ↔↔    | ↔    | ↔     |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12    | 12    | 12   | 12    |
| Grade (%)           | 0%    |      |       |       | -1%  |       | 0%    |       |       |       | 0%   |       |
| Storage Length (ft) | 225   |      | 0     | 0     |      | 200   | 150   |       | 250   | 150   |      | 0     |
| Storage Lanes       | 1     |      | 1     | 1     |      | 1     | 1     |       | 1     | 2     |      | 1     |
| Taper Length (ft)   | 50    |      |       | 50    |      |       | 50    |       |       | 50    |      |       |
| Lane Util. Factor   | 1.00  | 0.91 | 1.00  | 1.00  | 0.91 | 1.00  | 1.00  | 0.91  | 0.91  | 0.97  | 1.00 | 1.00  |
| Ped Bike Factor     |       |      |       |       |      |       |       | 0.99  | 0.99  |       |      | 0.99  |
| Frt                 |       |      | 0.850 |       |      | 0.850 |       | 0.874 | 0.850 |       |      | 0.850 |
| Flt Protected       | 0.950 |      |       | 0.950 |      |       | 0.950 |       |       | 0.950 |      |       |
| Satd. Flow (prot)   | 1770  | 5085 | 1583  | 1778  | 5111 | 1591  | 1770  | 1465  | 2882  | 3433  | 1863 | 1583  |
| Flt Permitted       | 0.950 |      |       | 0.950 |      |       | 0.950 |       |       | 0.950 |      |       |
| Satd. Flow (perm)   | 1770  | 5085 | 1583  | 1778  | 5111 | 1591  | 1770  | 1465  | 2844  | 3433  | 1863 | 1561  |
| Right Turn on Red   |       |      | Yes   |       |      | Yes   |       |       | Yes   |       |      | Yes   |
| Satd. Flow (RTOR)   |       |      | 25    |       |      | 67    |       |       | 169   | 100   |      | 75    |
| Link Speed (mph)    |       | 35   |       |       | 35   |       |       |       | 25    |       |      | 25    |
| Link Distance (ft)  |       | 737  |       |       | 358  |       |       |       | 831   |       |      | 642   |
| Travel Time (s)     |       | 14.4 |       |       | 7.0  |       |       |       | 22.7  |       |      | 17.5  |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
 11: Mark Center Dr/Mark Center Dr/ Southern Towers & Seminary Rd

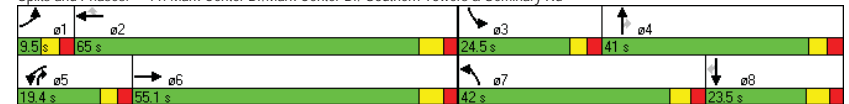
PM PEAK  
 10/22/2011

| Lane Group           | EBL  | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔    | ↔↔↔   | ↔     | ↔     | ↔↔↔   | ↔     | ↔     | ↔     | ↔↔    | ↔↔    | ↔     | ↔     |
| Volume (vph)         | 35   | 1700  | 55    | 165   | 1690  | 105   | 300   | 75    | 1305  | 180   | 15    | 70    |
| Turn Type            | Prot | NA    | Free  | Prot  | NA    | Perm  | Prot  | NA    | pm+ov | Prot  | NA    | Perm  |
| Protected Phases     | 1    | 6     |       | 5     | 2     |       | 7     | 4     | 5     | 3     | 8     |       |
| Permitted Phases     |      |       | Free  |       |       | 2     |       | 4     | 4     |       |       | 8     |
| Detector Phase       | 1    | 6     |       | 5     | 2     | 2     | 7     | 4     | 5     | 3     | 8     | 8     |
| Switch Phase         |      |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0  | 10.0  |       | 4.0   | 10.0  | 10.0  | 4.0   | 7.0   | 4.0   | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)    | 9.5  | 32.5  |       | 9.5   | 32.5  | 32.5  | 10.0  | 41.0  | 9.5   | 24.5  | 20.5  | 20.5  |
| Total Split (s)      | 9.5  | 55.1  | 0.0   | 19.4  | 65.0  | 65.0  | 42.0  | 41.0  | 19.4  | 24.5  | 23.5  | 23.5  |
| Total Split (%)      | 6.8% | 39.4% | 0.0%  | 13.9% | 46.4% | 46.4% | 30.0% | 29.3% | 13.9% | 17.5% | 16.8% | 16.8% |
| Yellow Time (s)      | 3.0  | 4.0   |       | 3.0   | 4.0   | 4.0   | 3.5   | 3.0   | 3.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 2.5  | 2.5   |       | 2.5   | 2.5   | 2.5   | 2.5   | 3.0   | 2.5   | 2.5   | 2.5   | 2.5   |
| Lost Time Adjust (s) | -1.5 | -2.5  | 0.0   | -1.5  | -2.5  | 0.0   | -2.0  | -2.0  | -1.5  | -1.5  | -1.5  | -1.5  |
| Total Lost Time (s)  | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 6.5   | 4.0   | 4.0   | 4.0   | 4.0   | 5.0   | 5.0   |
| Lead/Lag             | Lead | Lag   |       | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   |      |       |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None | C-Max |       | None  | C-Max | C-Max | None  | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 5.5  | 57.5  | 140.0 | 15.4  | 69.3  | 66.8  | 37.7  | 37.0  | 52.4  | 14.1  | 15.7  | 15.7  |
| Actuated g/C Ratio   | 0.04 | 0.41  | 1.00  | 0.11  | 0.50  | 0.48  | 0.27  | 0.26  | 0.37  | 0.10  | 0.11  | 0.11  |
| v/c Ratio            | 0.54 | 0.88  | 0.04  | 0.90  | 0.72  | 0.14  | 0.68  | 0.98  | 0.87  | 0.56  | 0.08  | 0.31  |
| Control Delay        | 89.2 | 27.8  | 0.0   | 104.3 | 30.5  | 10.6  | 55.0  | 69.0  | 43.1  | 66.0  | 56.7  | 15.4  |
| Queue Delay          | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 89.2 | 27.8  | 0.0   | 104.3 | 30.5  | 10.6  | 55.0  | 69.0  | 43.1  | 66.0  | 56.7  | 15.4  |
| LOS                  | F    | C     | A     | F     | C     | B     | E     | E     | D     | E     | E     | B     |
| Approach Delay       |      | 28.2  |       |       | 35.6  |       |       | 52.4  |       |       |       | 52.2  |
| Approach LOS         |      | C     |       |       | D     |       |       | D     |       |       |       | D     |

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 18 (13%), Referenced to phase 2:WBT and 6:EBT, Start of Green  
 Natural Cycle: 130  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.98  
 Intersection Signal Delay: 39.0  
 Intersection LOS: D  
 Intersection Capacity Utilization 87.8%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 11: Mark Center Dr/Mark Center Dr/ Southern Towers & Seminary Rd



Updated 2035 Baseline with Recommended Improvements  
 11: Mark Center Dr/Mark Center Dr/ Southern Towers & Seminary Rd

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 10/22/2011

| Lane Group              | EBL  | EBT   | EBR  | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 1    | 6     |      | 5     | 2     |       | 7     | 4     | 5     | 3     | 8     |       |
| Permitted Phases        |      |       | Free |       |       | 2     |       | 4     | 4     |       |       | 8     |
| Minimum Initial (s)     | 4.0  | 10.0  |      | 4.0   | 10.0  | 10.0  | 4.0   | 7.0   | 4.0   | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 9.5  | 32.5  |      | 9.5   | 32.5  | 32.5  | 10.0  | 41.0  | 9.5   | 24.5  | 20.5  | 20.5  |
| Total Split (s)         | 9.5  | 55.1  | 0.0  | 19.4  | 65.0  | 65.0  | 42.0  | 41.0  | 19.4  | 24.5  | 23.5  | 23.5  |
| Total Split (%)         | 6.8% | 39.4% | 0.0% | 13.9% | 46.4% | 46.4% | 30.0% | 29.3% | 13.9% | 17.5% | 16.8% | 16.8% |
| Maximum Green (s)       | 4.0  | 48.6  |      | 13.9  | 58.5  | 58.5  | 36.0  | 35.0  | 13.9  | 19.0  | 17.0  | 17.0  |
| Yellow Time (s)         | 3.0  | 4.0   |      | 3.0   | 4.0   | 4.0   | 3.5   | 3.0   | 3.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 2.5  | 2.5   |      | 2.5   | 2.5   | 2.5   | 2.5   | 3.0   | 2.5   | 2.5   | 2.5   | 2.5   |
| Lead/Lag                | Lead | Lag   |      | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?      |      |       |      |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0  | 0.2   |      | 2.0   | 0.2   | 0.2   | 3.0   | 2.0   | 2.0   | 2.0   | 0.2   | 0.2   |
| Minimum Gap (s)         | 2.0  | 0.2   |      | 2.0   | 0.2   | 0.2   | 3.0   | 2.0   | 2.0   | 2.0   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0  | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | C-Max |      | None  | C-Max | C-Max | None  | None  | None  | None  | None  | None  |
| Walk Time (s)           |      | 7.0   |      |       | 7.0   | 7.0   |       | 7.0   |       |       |       |       |
| Flash Dont Walk (s)     |      | 19.0  |      |       | 19.0  | 19.0  |       | 28.0  |       |       |       |       |
| Pedestrian Calls (#/hr) |      | 0     |      |       | 0     | 0     |       | 0     |       |       |       |       |
| 90th %ile Green (s)     | 4.0  | 51.6  |      | 13.9  | 61.5  | 61.5  | 36.0  | 35.0  | 13.9  | 16.0  | 14.0  | 14.0  |
| 90th %ile Term Code     | Max  | Coord |      | Max   | Coord | Coord | Max   | Max   | Max   | Gap   | Hold  | Hold  |
| 70th %ile Green (s)     | 4.0  | 53.7  |      | 13.9  | 63.6  | 63.6  | 34.3  | 35.0  | 13.9  | 13.9  | 13.6  | 13.6  |
| 70th %ile Term Code     | Max  | Coord |      | Max   | Coord | Coord | Gap   | Max   | Max   | Gap   | Hold  | Hold  |
| 50th %ile Green (s)     | 4.0  | 55.2  |      | 13.9  | 65.1  | 65.1  | 30.7  | 35.0  | 13.9  | 12.4  | 15.7  | 15.7  |
| 50th %ile Term Code     | Max  | Coord |      | Max   | Coord | Coord | Gap   | Max   | Max   | Gap   | Hold  | Hold  |
| 30th %ile Green (s)     | 4.0  | 56.7  |      | 13.9  | 66.6  | 66.6  | 27.1  | 35.0  | 13.9  | 10.9  | 17.8  | 17.8  |
| 30th %ile Term Code     | Max  | Coord |      | Max   | Coord | Coord | Gap   | Max   | Max   | Gap   | Hold  | Hold  |
| 10th %ile Green (s)     | 0.0  | 57.6  |      | 13.9  | 77.0  | 77.0  | 50.5  | 35.0  | 13.9  | 10.0  | 0.0   | 0.0   |
| 10th %ile Term Code     | Skip | Coord |      | Max   | Coord | Coord | Hold  | Max   | Max   | Min   | Skip  | Skip  |

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 18 (13%), Referenced to phase 2:WBT and 6:EBT, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
 12: Beauregard St & Seminary Rd

PM PEAK  
 10/22/2011


| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT  | WBR   | NBL   | NBT  | NBR   | SBL   | SBT   | SBR   |
|---------------------|-------|-------|------|-------|------|-------|-------|------|-------|-------|-------|-------|
| Lane Configurations |       | ↑↑↑   |      | ↑↑↑   | ↑↑   | ↑     |       | ↑↑   | ↑↑    | ↑↑    | ↑↑    | ↑↑    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12    |
| Grade (%)           |       | -1%   |      |       | -1%  |       |       | 0%   |       |       |       | 2%    |
| Storage Length (ft) | 150   |       | 300  | 250   |      | 0     | 200   |      | 245   | 170   |       | 0     |
| Storage Lanes       | 1     |       | 1    | 2     |      | 1     | 1     |      | 1     | 2     |       | 1     |
| Taper Length (ft)   | 50    |       |      | 50    |      |       | 50    |      |       | 50    |       |       |
| Lane Util. Factor   | 1.00  | 0.91  | 0.91 | 0.94  | 0.95 | 1.00  | 0.97  | 0.95 | 1.00  | 0.97  | 0.95  | 0.95  |
| Ped Bike Factor     |       | 1.00  |      |       |      | 0.98  |       |      | 0.99  |       | 0.99  | 1.00  |
| Frt                 |       | 0.950 |      |       |      | 0.850 |       |      | 0.850 |       | 0.850 | 0.986 |
| Flt Protected       | 0.950 |       |      | 0.950 |      |       | 0.950 |      |       | 0.950 |       |       |
| Satd. Flow (prot)   | 1778  | 4834  | 0    | 5015  | 3557 | 1591  | 3433  | 3539 | 1583  | 3399  | 3449  | 0     |
| Flt Permitted       | 0.950 |       |      | 0.950 |      |       | 0.950 |      |       | 0.950 |       |       |
| Satd. Flow (perm)   | 1778  | 4834  | 0    | 5015  | 3557 | 1552  | 3433  | 3539 | 1560  | 3399  | 3449  | 0     |
| Right Turn on Red   |       |       | Yes  |       |      | Yes   |       |      | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)   |       | 111   |      |       |      | 181   |       |      | 146   |       |       | 8     |
| Link Speed (mph)    |       | 35    |      |       | 35   |       |       | 35   |       |       |       | 35    |
| Link Distance (ft)  |       | 1256  |      |       | 737  |       |       | 824  |       |       |       | 1416  |
| Travel Time (s)     |       | 24.5  |      |       | 14.4 |       |       | 16.1 |       |       |       | 27.6  |

Intersection Summary

Area Type: Other

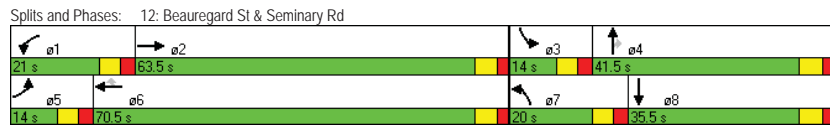
Updated 2035 Baseline with Recommended Improvements  
12: Beauregard St & Seminary Rd

PM PEAK  
10/22/2011




| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔↔    | ↔↔    | ↔     | ↔↔    | ↔↔    | ↔     | ↔↔    | ↔↔    |
| Volume (vph)         | 85    | 1255  | 530   | 1295  | 235   | 350   | 400   | 355   | 180   | 610   |
| Turn Type            | Prot  | NA    | Prot  | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     |       | 7     | 4     |       | 3     | 8     |
| Permitted Phases     |       |       |       |       | 6     |       |       | 4     |       |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 6     | 7     | 4     | 4     | 3     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 6.0   | 10.0  | 6.0   | 10.0  | 10.0  | 6.0   | 7.0   | 7.0   | 6.0   | 7.0   |
| Minimum Split (s)    | 12.0  | 35.0  | 12.0  | 35.0  | 35.0  | 12.0  | 35.5  | 35.5  | 12.0  | 35.5  |
| Total Split (s)      | 14.0  | 63.5  | 21.0  | 70.5  | 70.5  | 20.0  | 41.5  | 41.5  | 14.0  | 35.5  |
| Total Split (%)      | 10.0% | 45.4% | 15.0% | 50.4% | 50.4% | 14.3% | 29.6% | 29.6% | 10.0% | 25.4% |
| Yellow Time (s)      | 3.5   | 4.0   | 3.5   | 4.0   | 4.0   | 3.5   | 4.0   | 4.0   | 3.5   | 4.0   |
| All-Red Time (s)     | 2.5   | 2.0   | 2.5   | 2.0   | 2.0   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   |
| Lost Time Adjust (s) | -2.0  | -2.0  | -2.0  | -2.0  | 0.0   | -2.0  | -2.5  | 0.0   | -2.0  | -5.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 6.0   | 4.0   | 6.5   | 4.0   | 1.5   |       |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Max | None  | C-Max | C-Max | None  | Min   | Min   | None  | Min   |
| Act Effct Green (s)  | 9.7   | 59.9  | 17.0  | 67.3  | 65.3  | 16.0  | 37.1  | 34.6  | 10.0  | 33.6  |
| Actuated g/C Ratio   | 0.07  | 0.43  | 0.12  | 0.48  | 0.47  | 0.11  | 0.26  | 0.25  | 0.07  | 0.24  |
| v/c Ratio            | 0.74  | 0.95  | 0.94  | 0.81  | 0.31  | 0.96  | 0.46  | 0.77  | 0.80  | 0.87  |
| Control Delay        | 97.2  | 27.8  | 92.4  | 22.2  | 5.7   | 97.4  | 44.8  | 41.2  | 87.3  | 62.8  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.2   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 97.2  | 27.8  | 92.4  | 22.4  | 5.7   | 97.4  | 44.8  | 41.2  | 87.3  | 62.8  |
| LOS                  | F     | C     | F     | C     | A     | F     | D     | D     | F     | E     |
| Approach Delay       |       | 30.8  |       | 38.5  |       |       | 60.3  |       |       | 67.9  |
| Approach LOS         |       | C     |       | D     |       |       | E     |       |       | E     |

**Intersection Summary**  
 Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection  
 Natural Cycle: 125  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.96  
 Intersection Signal Delay: 44.2  
 Intersection LOS: D  
 Intersection Capacity Utilization 91.2%  
 ICU Level of Service F  
 Analysis Period (min) 15



Updated 2035 Baseline with Recommended Improvements  
12: Beauregard St & Seminary Rd

PM PEAK  
10/22/2011



| Lane Group              | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 5     | 2     | 1     | 6     |       | 7     | 4     |       | 3     | 8     |
| Permitted Phases        |       |       |       |       | 6     |       |       | 4     |       |       |
| Minimum Initial (s)     | 6.0   | 10.0  | 6.0   | 10.0  | 10.0  | 6.0   | 7.0   | 7.0   | 6.0   | 7.0   |
| Minimum Split (s)       | 12.0  | 35.0  | 12.0  | 35.0  | 35.0  | 12.0  | 35.5  | 35.5  | 12.0  | 35.5  |
| Total Split (s)         | 14.0  | 63.5  | 21.0  | 70.5  | 70.5  | 20.0  | 41.5  | 41.5  | 14.0  | 35.5  |
| Total Split (%)         | 10.0% | 45.4% | 15.0% | 50.4% | 50.4% | 14.3% | 29.6% | 29.6% | 10.0% | 25.4% |
| Maximum Green (s)       | 8.0   | 57.5  | 15.0  | 64.5  | 64.5  | 14.0  | 35.0  | 35.0  | 8.0   | 29.0  |
| Yellow Time (s)         | 3.5   | 4.0   | 3.5   | 4.0   | 4.0   | 3.5   | 4.0   | 4.0   | 3.5   | 4.0   |
| All-Red Time (s)        | 2.5   | 2.0   | 2.5   | 2.0   | 2.0   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 1.0   | 0.2   | 2.0   | 0.2   | 0.2   | 1.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Minimum Gap (s)         | 1.0   | 0.2   | 2.0   | 0.2   | 0.2   | 1.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | C-Max | None  | C-Max | C-Max | None  | Min   | Min   | None  | Min   |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     | 22.0  | 22.0  | 22.0  | 22.0  | 22.0  | 22.0  | 22.0  | 22.0  | 22.0  | 22.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     |
| 90th %ile Green (s)     | 8.0   | 57.5  | 15.0  | 64.5  | 64.5  | 14.0  | 35.0  | 35.0  | 8.0   | 29.0  |
| 90th %ile Term Code     | Max   | Coord | Max   | Coord | Coord | Max   | Max   | Max   | Max   | Max   |
| 70th %ile Green (s)     | 8.0   | 57.5  | 15.0  | 64.5  | 64.5  | 14.0  | 35.0  | 35.0  | 8.0   | 29.0  |
| 70th %ile Term Code     | Max   | Coord | Max   | Coord | Coord | Max   | Hold  | Hold  | Max   | Max   |
| 50th %ile Green (s)     | 8.0   | 57.5  | 15.0  | 64.5  | 64.5  | 14.0  | 35.0  | 35.0  | 8.0   | 29.0  |
| 50th %ile Term Code     | Max   | Coord | Max   | Coord | Coord | Max   | Hold  | Hold  | Max   | Max   |
| 30th %ile Green (s)     | 8.0   | 57.5  | 15.0  | 64.5  | 64.5  | 14.0  | 35.0  | 35.0  | 8.0   | 29.0  |
| 30th %ile Term Code     | Max   | Coord | Max   | Coord | Coord | Max   | Hold  | Hold  | Max   | Max   |
| 10th %ile Green (s)     | 6.3   | 59.6  | 15.0  | 68.3  | 68.3  | 14.0  | 32.9  | 32.9  | 8.0   | 26.9  |
| 10th %ile Term Code     | Gap   | Coord | Max   | Coord | Coord | Max   | Hold  | Hold  | Max   | Gap   |

**Intersection Summary**  
 Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
13: Echols Ave & Seminary Rd

PM PEAK  
10/22/2011

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL  | NBT   | NBR   | SBL  | SBT   | SBR   |
|---------------------|-------|------|------|-------|-------|------|------|-------|-------|------|-------|-------|
| Lane Configurations | ↔     | ↕    | ↔    | ↔     | ↕     | ↔    | ↔    | ↕     | ↔     | ↔    | ↕     | ↔     |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12   | 12   | 12    | 12    | 12   | 12    | 12    |
| Grade (%)           |       | -1%  |      |       | 1%    |      |      | 0%    |       |      |       | 0%    |
| Storage Length (ft) | 75    |      | 0    | 150   |       | 0    | 0    |       | 0     | 0    |       | 0     |
| Storage Lanes       | 1     |      | 0    | 1     |       | 0    | 0    |       | 0     | 0    |       | 0     |
| Taper Length (ft)   | 50    |      |      | 50    |       |      | 50   |       | 50    |      |       | 50    |
| 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  |
| Ped Bike Factor     |       |      |      |       |       |      |      |       |       |      |       | 0.99  |
| Frt                 |       |      |      |       | 0.999 |      |      |       | 0.888 |      |       | 0.932 |
| Flt Protected       | 0.950 |      |      | 0.950 |       |      |      |       | 0.992 |      |       | 0.976 |
| Satd. Flow (prot)   | 1778  | 3557 | 0    | 1761  | 3518  | 0    | 0    | 1641  | 0     | 0    | 1679  | 0     |
| Flt Permitted       | 0.114 |      |      | 0.039 |       |      |      | 0.992 |       |      | 0.976 |       |
| Satd. Flow (perm)   | 213   | 3557 | 0    | 72    | 3518  | 0    | 0    | 1641  | 0     | 0    | 1679  | 0     |
| Right Turn on Red   |       |      | Yes  |       |       | Yes  |      |       | Yes   |      |       | Yes   |
| Satd. Flow (RTOR)   |       |      |      |       | 1     |      |      | 54    |       |      | 5     |       |
| Link Speed (mph)    |       | 35   |      |       | 35    |      |      | 25    |       |      | 25    |       |
| Link Distance (ft)  |       | 1011 |      |       | 1256  |      |      | 653   |       |      | 530   |       |
| Travel Time (s)     |       | 19.7 |      |       | 24.5  |      |      | 17.8  |       |      | 14.5  |       |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
13: Echols Ave & Seminary Rd

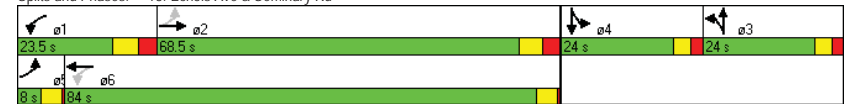
PM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBT   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↕     | ↕     |
| Volume (vph)         | 5     | 1890  | 95    | 1595  | 0     | 0     |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | NA    | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     | 3     | 4     |
| Permitted Phases     | 2     |       | 6     |       |       |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 3     | 4     |
| Switch Phase         |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 6.0   | 10.0  | 4.0   | 7.0   | 7.0   |
| Minimum Split (s)    | 8.0   | 13.0  | 23.5  | 20.0  | 24.0  | 24.0  |
| Total Split (s)      | 8.0   | 68.5  | 23.5  | 84.0  | 24.0  | 24.0  |
| Total Split (%)      | 5.7%  | 48.9% | 16.8% | 60.0% | 17.1% | 17.1% |
| Yellow Time (s)      | 3.5   | 4.0   | 4.5   | 3.5   | 3.0   | 3.0   |
| All-Red Time (s)     | 0.5   | 3.0   | 3.0   | 0.5   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -3.5  | -3.5  | -3.0  | -3.5  | -1.0  | -1.0  |
| Total Lost Time (s)  | 0.5   | 3.5   | 4.5   | 0.5   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  |
| Lead-Lag Optimize?   |       |       |       |       |       |       |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | None  |
| Act Effct Green (s)  | 109.5 | 99.0  | 115.7 | 118.2 | 11.0  | 10.4  |
| Actuated g/C Ratio   | 0.78  | 0.71  | 0.83  | 0.84  | 0.08  | 0.07  |
| v/c Ratio            | 0.02  | 0.81  | 0.46  | 0.58  | 0.37  | 0.08  |
| Control Delay        | 2.2   | 10.5  | 21.9  | 14.1  | 24.2  | 41.9  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 2.2   | 10.5  | 21.9  | 14.1  | 24.2  | 41.9  |
| LOS                  | A     | B     | C     | B     | C     | D     |
| Approach Delay       |       | 10.5  |       | 14.5  | 24.2  | 41.9  |
| Approach LOS         |       | B     |       | B     | C     | D     |

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 111 (79%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 145  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.81  
 Intersection Signal Delay: 12.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 77.8%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 13: Echols Ave & Seminary Rd



Updated 2035 Baseline with Recommended Improvements  
13: Echols Ave & Seminary Rd

PM PEAK  
10/22/2011

| Lane Group              | EBL  | EBT   | WBL   | WBT   | NBT   | SBT   |
|-------------------------|------|-------|-------|-------|-------|-------|
| Protected Phases        | 5    | 2     | 1     | 6     | 3     | 4     |
| Permitted Phases        | 2    |       | 6     |       |       |       |
| Minimum Initial (s)     | 4.0  | 6.0   | 10.0  | 4.0   | 7.0   | 7.0   |
| Minimum Split (s)       | 8.0  | 13.0  | 23.5  | 20.0  | 24.0  | 24.0  |
| Total Split (s)         | 8.0  | 68.5  | 23.5  | 84.0  | 24.0  | 24.0  |
| Total Split (%)         | 5.7% | 48.9% | 16.8% | 60.0% | 17.1% | 17.1% |
| Maximum Green (s)       | 4.0  | 61.5  | 16.0  | 80.0  | 19.0  | 19.0  |
| Yellow Time (s)         | 3.5  | 4.0   | 4.5   | 3.5   | 3.0   | 3.0   |
| All-Red Time (s)        | 0.5  | 3.0   | 3.0   | 0.5   | 2.0   | 2.0   |
| Lead/Lag                | Lead | Lag   | Lead  | Lag   | Lag   | Lead  |
| Lead-Lag Optimize?      |      |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0  | 2.0   | 0.2   | 3.0   | 4.0   | 2.0   |
| Minimum Gap (s)         | 3.0  | 2.0   | 0.2   | 3.0   | 4.0   | 2.0   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | C-Min | None  | C-Min | None  | None  |
| Walk Time (s)           |      |       |       |       | 4.0   | 4.0   |
| Flash Dont Walk (s)     |      |       |       |       | 15.0  | 15.0  |
| Pedestrian Calls (#/hr) |      |       |       |       | 5     | 5     |
| 90th %ile Green (s)     | 4.0  | 66.1  | 11.4  | 80.0  | 19.0  | 19.0  |
| 90th %ile Term Code     | Max  | Coord | Gap   | Coord | Ped   | Ped   |
| 70th %ile Green (s)     | 0.0  | 89.2  | 10.0  | 109.7 | 9.3   | 7.0   |
| 70th %ile Term Code     | Skip | Coord | Min   | Coord | Gap   | Min   |
| 50th %ile Green (s)     | 0.0  | 103.0 | 10.0  | 123.5 | 7.5   | 0.0   |
| 50th %ile Term Code     | Skip | Coord | Min   | Coord | Gap   | Skip  |
| 30th %ile Green (s)     | 0.0  | 103.5 | 10.0  | 124.0 | 7.0   | 0.0   |
| 30th %ile Term Code     | Skip | Coord | Min   | Coord | Min   | Skip  |
| 10th %ile Green (s)     | 0.0  | 115.5 | 10.0  | 136.0 | 0.0   | 0.0   |
| 10th %ile Term Code     | Skip | Coord | Min   | Coord | Skip  | Skip  |

Intersection Summary

Cycle Length: 140  
Actuated Cycle Length: 140  
Offset: 111 (79%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
14: Dawes Ave & Seminary Rd

PM PEAK  
10/22/2011

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR   |
|---------------------|-------|------|------|-------|-------|------|------|-------|------|------|------|-------|
| Lane Configurations |       |      |      |       |       |      |      |       |      |      |      |       |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12   | 12   | 12    | 12   | 12   | 12   | 12    |
| Grade (%)           |       | 0%   |      |       | 0%    |      |      | 0%    |      |      | 0%   |       |
| Storage Length (ft) | 240   |      | 0    | 55    |       | 0    | 0    |       | 0    | 0    |      | 0     |
| Storage Lanes       | 1     |      | 0    | 1     |       | 0    | 0    |       | 0    | 0    |      | 1     |
| Taper Length (ft)   | 50    |      |      | 50    |       |      | 50   |       | 50   |      |      | 50    |
| 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  |
| Ped Bike Factor     |       | 1.00 |      |       | 1.00  |      |      | 0.99  |      |      |      | 0.96  |
| Frt                 |       |      |      |       | 0.997 |      |      | 0.918 |      |      |      | 0.850 |
| Flt Protected       | 0.950 |      |      | 0.950 |       |      |      | 0.985 |      |      |      | 0.961 |
| Satd. Flow (prot)   | 1770  | 3539 | 0    | 1770  | 3527  | 0    | 0    | 1662  | 0    | 0    | 1790 | 1583  |
| Flt Permitted       | 0.138 |      |      | 0.055 |       |      |      | 0.895 |      |      |      | 0.721 |
| Satd. Flow (perm)   | 257   | 3539 | 0    | 102   | 3527  | 0    | 0    | 1510  | 0    | 0    | 1343 | 1527  |
| Right Turn on Red   |       |      | Yes  |       |       | Yes  |      |       | Yes  |      |      | Yes   |
| Satd. Flow (RTOR)   |       |      |      |       | 4     |      |      | 32    |      |      |      | 32    |
| Link Speed (mph)    |       | 35   |      |       | 35    |      |      | 25    |      |      |      | 25    |
| Link Distance (ft)  |       | 248  |      |       | 1011  |      |      | 734   |      |      |      | 1285  |
| Travel Time (s)     |       | 4.8  |      |       | 19.7  |      |      | 20.0  |      |      |      | 35.0  |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
14: Dawes Ave & Seminary Rd

PM PEAK  
10/22/2011



| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↔     |
| Volume (vph)         | 25    | 1805  | 145   | 1435  | 15    | 5     | 60    | 15    | 30    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | NA    | Perm  |
| Protected Phases     | 5     | 2     | 1     | 6     |       | 4     |       | 4     |       |
| Permitted Phases     | 2     |       | 6     |       | 4     |       | 4     |       | 4     |
| Detector Phase       | 5     | 2     | 1     | 6     | 4     | 4     | 4     | 4     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 10.0  | 4.0   | 10.0  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)    | 9.0   | 30.0  | 9.0   | 16.0  | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  |
| Total Split (s)      | 9.0   | 95.0  | 18.0  | 104.0 | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  |
| Total Split (%)      | 6.4%  | 67.9% | 12.9% | 74.3% | 19.3% | 19.3% | 19.3% | 19.3% | 19.3% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | -1.0  | -2.0  | -1.0  | -2.0  | -2.0  | -2.0  | -2.0  | -2.0  | -2.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 105.8 | 100.8 | 116.7 | 111.3 |       | 15.3  |       | 15.3  | 15.3  |
| Actuated g/C Ratio   | 0.76  | 0.72  | 0.83  | 0.80  |       | 0.11  |       | 0.11  | 0.11  |
| v/c Ratio            | 0.11  | 0.76  | 0.69  | 0.56  |       | 0.27  |       | 0.55  | 0.16  |
| Control Delay        | 4.2   | 16.1  | 47.4  | 6.3   |       | 30.0  |       | 71.9  | 18.0  |
| Queue Delay          | 0.0   | 5.2   | 0.0   | 0.0   |       | 0.0   |       | 0.0   | 0.0   |
| Total Delay          | 4.2   | 21.3  | 47.4  | 6.3   |       | 30.0  |       | 71.9  | 18.0  |
| LOS                  | A     | C     | D     | A     |       | C     |       | E     | B     |
| Approach Delay       |       | 21.1  |       | 10.0  |       | 30.0  |       | 56.7  |       |
| Approach LOS         |       | C     |       | A     |       | C     |       | E     |       |

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 71 (51%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.76  
 Intersection Signal Delay: 17.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 80.2%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 14: Dawes Ave & Seminary Rd



Updated 2035 Baseline with Recommended Improvements  
14: Dawes Ave & Seminary Rd

PM PEAK  
10/22/2011



| Lane Group              | EBL  | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|-------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 5    | 2     | 1     | 6     |       | 4     |       | 4     |       |
| Permitted Phases        | 2    |       | 6     |       | 4     |       | 4     |       | 4     |
| Minimum Initial (s)     | 4.0  | 10.0  | 4.0   | 10.0  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)       | 9.0  | 30.0  | 9.0   | 16.0  | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  |
| Total Split (s)         | 9.0  | 95.0  | 18.0  | 104.0 | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  |
| Total Split (%)         | 6.4% | 67.9% | 12.9% | 74.3% | 19.3% | 19.3% | 19.3% | 19.3% | 19.3% |
| Maximum Green (s)       | 4.0  | 89.0  | 13.0  | 98.0  | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  |
| Yellow Time (s)         | 3.0  | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0  | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead | Lag   | Lead  | Lag   |       |       |       |       |       |
| Lead-Lag Optimize?      |      |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0  | 0.2   | 2.0   | 0.2   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Minimum Gap (s)         | 2.0  | 0.2   | 2.0   | 0.2   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | C-Max | None  | C-Max | None  | None  | None  | None  | None  |
| Walk Time (s)           |      | 4.0   |       |       | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Flash Dont Walk (s)     |      | 20.0  |       |       | 17.0  | 17.0  | 17.0  | 17.0  | 17.0  |
| Pedestrian Calls (#/hr) |      | 5     |       |       | 5     | 5     | 5     | 5     | 5     |
| 90th %ile Green (s)     | 4.0  | 89.0  | 13.0  | 98.0  | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  |
| 90th %ile Term Code     | Max  | Coord | Max   | Coord | Ped   | Ped   | Ped   | Ped   | Ped   |
| 70th %ile Green (s)     | 4.0  | 95.1  | 13.0  | 104.1 | 14.9  | 14.9  | 14.9  | 14.9  | 14.9  |
| 70th %ile Term Code     | Max  | Coord | Max   | Coord | Gap   | Gap   | Gap   | Gap   | Gap   |
| 50th %ile Green (s)     | 4.0  | 98.1  | 12.3  | 106.4 | 12.6  | 12.6  | 12.6  | 12.6  | 12.6  |
| 50th %ile Term Code     | Max  | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Gap   | Gap   |
| 30th %ile Green (s)     | 0.0  | 103.0 | 9.8   | 117.8 | 10.2  | 10.2  | 10.2  | 10.2  | 10.2  |
| 30th %ile Term Code     | Skip | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Gap   | Gap   |
| 10th %ile Green (s)     | 0.0  | 109.0 | 6.0   | 120.0 | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| 10th %ile Term Code     | Skip | Coord | Gap   | Coord | Min   | Min   | Min   | Min   | Min   |

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 71 (51%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Control Type: Actuated-Coordinated



Updated 2035 Baseline with Recommended Improvements  
15: Beauregard St & Mark Center Dr

PM PEAK  
10/22/2011

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL   | NBT  | NBR  | SBL   | SBT   | SBR  |
|---------------------|-------|------|------|-------|-------|------|-------|------|------|-------|-------|------|
| Lane Configurations | ↔     | ↔    | ↔    | ↔     | ↔     | ↔    | ↔     | ↔    | ↔    | ↔     | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12   | 12    | 12   | 12   | 12    | 12    | 12   |
| Grade (%)           | 0%    |      | 0%   |       | 0%    |      | 0%    |      | 0%   |       | 0%    |      |
| Storage Length (ft) | 200   |      | 0    | 150   |       | 200  | 190   |      | 200  | 0     |       | 0    |
| Storage Lanes       | 1     |      | 0    | 1     |       | 1    |       |      | 1    | 1     |       | 0    |
| Taper Length (ft)   | 50    |      |      | 50    |       |      | 50    |      |      | 50    |       |      |
| Lane Util. Factor   | 1.00  | 1.00 | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 0.91 | 1.00 | 0.97  | 0.95  | 0.95 |
| Ped Bike Factor     |       |      |      |       |       |      | 0.99  |      |      |       | 1.00  |      |
| Frt                 | 0.911 |      |      |       | 0.850 |      |       |      |      | 0.850 | 0.993 |      |
| Flt Protected       | 0.950 |      |      | 0.950 |       |      | 0.950 |      |      | 0.950 |       |      |
| Satd. Flow (prot)   | 1770  | 1697 | 0    | 1770  | 1863  | 1583 | 1770  | 5085 | 1583 | 3433  | 3509  | 0    |
| Flt Permitted       | 0.754 |      |      | 0.722 |       |      | 0.950 |      |      | 0.950 |       |      |
| Satd. Flow (perm)   | 1405  | 1697 | 0    | 1345  | 1863  | 1562 | 1770  | 5085 | 1583 | 3433  | 3509  | 0    |
| Right Turn on Red   |       |      | Yes  |       |       | Yes  |       |      | Yes  |       |       | Yes  |
| Satd. Flow (RTOR)   | 32    |      |      |       | 151   |      |       |      |      | 48    | 7     |      |
| Link Speed (mph)    | 25    |      |      |       | 25    |      |       |      |      | 35    | 35    |      |
| Link Distance (ft)  | 355   |      |      |       | 910   |      |       |      |      | 780   | 824   |      |
| Travel Time (s)     | 9.7   |      |      |       | 24.8  |      |       |      |      | 15.2  | 16.1  |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
15: Beauregard St & Mark Center Dr

PM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔    | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 80    | 20    | 310   | 5     | 140   | 5    | 885   | 45    | 145   | 1535  |
| Turn Type            | Perm  | NA    | Perm  | NA    | Perm  | Prot | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 4     |       | 4     |       | 4     |      | 5     |       | 2     |       |
| Permitted Phases     | 4     |       | 4     |       | 4     |      | 5     |       | 2     |       |
| Detector Phase       | 4     |       | 4     |       | 4     |      | 5     |       | 2     |       |
| Switch Phase         |       |       |       |       |       |      |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 4.0  | 10.0  | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 33.0  | 33.0  | 33.0  | 33.0  | 33.0  | 9.0  | 24.0  | 24.0  | 9.0   | 24.0  |
| Total Split (s)      | 37.0  | 37.0  | 37.0  | 37.0  | 37.0  | 9.0  | 60.0  | 60.0  | 13.0  | 64.0  |
| Total Split (%)      | 33.6% | 33.6% | 33.6% | 33.6% | 33.6% | 8.2% | 54.5% | 54.5% | 11.8% | 58.2% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0  | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.0  | -2.0  | -2.0  | -2.0  | 0.0   | -1.0 | -2.0  | 0.0   | -1.0  | -2.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 6.0   | 4.0  | 4.0   | 6.0   | 4.0   | 4.0   |
| Lead/Lag             |       |       |       |       |       |      | Lead  | Lag   | Lag   | Lead  |
| Lead-Lag Optimize?   |       |       |       |       |       |      |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None | C-Max | C-Max | None  | C-Max |
| Act Effct Green (s)  | 30.7  | 30.7  | 30.7  | 30.7  | 28.7  | 5.0  | 58.6  | 56.6  | 8.7   | 69.5  |
| Actuated g/C Ratio   | 0.28  | 0.28  | 0.28  | 0.28  | 0.26  | 0.05 | 0.53  | 0.51  | 0.08  | 0.63  |
| v/c Ratio            | 0.22  | 0.11  | 0.89  | 0.01  | 0.29  | 0.06 | 0.35  | 0.06  | 0.57  | 0.78  |
| Control Delay        | 31.1  | 15.1  | 63.7  | 27.2  | 6.5   | 54.8 | 14.6  | 4.4   | 57.6  | 19.2  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.3   |
| Total Delay          | 31.1  | 15.1  | 63.7  | 27.2  | 6.5   | 54.8 | 14.6  | 4.4   | 57.6  | 19.5  |
| LOS                  | C     | B     | E     | C     | A     | D    | B     | A     | E     | B     |
| Approach Delay       | 24.9  |       | 45.7  |       | 14.3  |      | 22.6  |       |       |       |
| Approach LOS         | C     |       | D     |       | B     |      | C     |       |       |       |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 2 (2%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.89  
 Intersection Signal Delay: 23.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 82.2%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 15: Beauregard St & Mark Center Dr



Updated 2035 Baseline with Recommended Improvements  
 15: Beauregard St & Mark Center Dr

PM PEAK  
 10/22/2011

| Lane Group              | EBL   | EBT   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| Protected Phases        |       | 4     |       | 4     |       | 5    | 2     |       | 1     | 6     |
| Permitted Phases        | 4     |       | 4     |       | 4     |      |       | 2     |       |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 4.0  | 10.0  | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)       | 33.0  | 33.0  | 33.0  | 33.0  | 33.0  | 9.0  | 24.0  | 24.0  | 9.0   | 24.0  |
| Total Split (s)         | 37.0  | 37.0  | 37.0  | 37.0  | 37.0  | 9.0  | 60.0  | 60.0  | 13.0  | 64.0  |
| Total Split (%)         | 33.6% | 33.6% | 33.6% | 33.6% | 33.6% | 8.2% | 54.5% | 54.5% | 11.8% | 58.2% |
| Maximum Green (s)       | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 4.0  | 54.0  | 54.0  | 8.0   | 58.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0  | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       |       | Lead | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |      |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0  | 0.2   | 0.2   | 2.0   | 0.2   |
| Minimum Gap (s)         | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0  | 0.2   | 0.2   | 2.0   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None | C-Max | C-Max | None  | C-Max |
| Walk Time (s)           | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |      | 6.0   | 6.0   |       | 6.0   |
| Flash Dont Walk (s)     | 19.0  | 19.0  | 19.0  | 19.0  | 19.0  |      | 12.0  | 12.0  |       | 12.0  |
| Pedestrian Calls (#/hr) | 5     | 5     | 5     | 5     | 5     |      | 5     | 5     |       | 5     |
| 90th %ile Green (s)     | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 4.0  | 54.0  | 54.0  | 8.0   | 58.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max  | Coord | Coord | Max   | Coord |
| 70th %ile Green (s)     | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 0.0  | 54.0  | 54.0  | 8.0   | 67.0  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Skip | Coord | Coord | Max   | Coord |
| 50th %ile Green (s)     | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 0.0  | 54.0  | 54.0  | 8.0   | 67.0  |
| 50th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Skip | Coord | Coord | Max   | Coord |
| 30th %ile Green (s)     | 28.3  | 28.3  | 28.3  | 28.3  | 28.3  | 0.0  | 56.7  | 56.7  | 8.0   | 69.7  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Skip | Coord | Coord | Max   | Coord |
| 10th %ile Green (s)     | 22.0  | 22.0  | 22.0  | 22.0  | 22.0  | 0.0  | 64.4  | 64.4  | 6.6   | 76.0  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Skip | Coord | Coord | Gap   | Coord |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 2 (2%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
 16: Beauregard St & Clyde's Restaurant/Highview Ln

PM PEAK  
 10/22/2011

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT  | SBR   |
|---------------------|-------|-------|------|-------|-------|------|-------|-------|------|-------|------|-------|
| Lane Configurations |       |       |      |       |       |      |       |       |      |       |      |       |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12   | 12    |
| Grade (%)           |       | 0%    |      |       |       | 0%   |       | 0%    |      |       |      | -1%   |
| Storage Length (ft) | 0     |       | 150  | 115   |       | 0    | 185   |       | 0    | 185   |      | 0     |
| Storage Lanes       | 1     |       | 1    | 1     |       | 0    | 1     |       | 0    | 1     |      | 0     |
| Taper Length (ft)   | 50    |       |      | 50    |       |      | 50    |       |      | 50    |      |       |
| 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     | 0.99  |       |      | 0.98  |       |      | 1.00  |       |      | 1.00  |      | 1.00  |
| Frt                 |       | 0.897 |      |       | 0.861 |      |       | 0.998 |      |       |      | 0.994 |
| Flt Protected       | 0.950 |       |      | 0.950 |       |      | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (prot)   | 1770  | 1656  | 0    | 1770  | 1576  | 0    | 1770  | 3531  | 0    | 1778  | 3530 | 0     |
| Flt Permitted       | 0.711 |       |      | 0.747 |       |      | 0.055 |       |      | 0.315 |      |       |
| Satd. Flow (perm)   | 1324  | 1656  | 0    | 1391  | 1576  | 0    | 102   | 3531  | 0    | 590   | 3530 | 0     |
| Right Turn on Red   |       |       | Yes  |       |       | Yes  |       |       | Yes  |       |      | Yes   |
| Satd. Flow (RTOR)   |       | 11    |      |       | 65    |      |       | 2     |      |       | 7    |       |
| Link Speed (mph)    |       | 25    |      |       | 25    |      |       | 35    |      |       | 35   |       |
| Link Distance (ft)  |       | 521   |      |       | 422   |      |       | 719   |      |       | 780  |       |
| Travel Time (s)     |       | 14.2  |      |       | 11.5  |      |       | 14.0  |      |       | 15.2 |       |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
16: Beauregard St & Clyde's Restaurant/Highview Ln

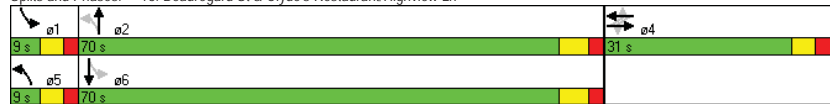
PM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |
| Volume (vph)         | 55    | 5     | 55    | 5     | 35    | 820   | 10    | 1785  |
| 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   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 31.0  | 31.0  | 31.0  | 31.0  | 9.0   | 31.0  | 9.0   | 31.0  |
| Total Split (s)      | 31.0  | 31.0  | 31.0  | 31.0  | 9.0   | 70.0  | 9.0   | 70.0  |
| Total Split (%)      | 28.2% | 28.2% | 28.2% | 28.2% | 8.2%  | 63.6% | 8.2%  | 63.6% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  | 10.5  | 10.5  | 10.5  | 10.5  | 90.2  | 89.1  | 87.8  | 84.5  |
| Actuated g/C Ratio   | 0.10  | 0.10  | 0.10  | 0.10  | 0.82  | 0.81  | 0.80  | 0.77  |
| v/c Ratio            | 0.46  | 0.10  | 0.44  | 0.33  | 0.22  | 0.31  | 0.02  | 0.74  |
| Control Delay        | 58.1  | 27.0  | 56.5  | 16.8  | 6.6   | 3.3   | 1.4   | 5.3   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 58.1  | 27.0  | 56.5  | 16.8  | 6.6   | 3.3   | 1.4   | 5.4   |
| LOS                  | E     | C     | E     | B     | A     | A     | A     | A     |
| Approach Delay       |       | 51.5  |       | 35.0  |       | 3.5   |       | 5.3   |
| Approach LOS         |       | D     |       | C     |       | A     |       | A     |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 8 (7%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 7.1  
 Intersection LOS: A  
 Intersection Capacity Utilization 73.3%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 16: Beauregard St & Clyde's Restaurant/Highview Ln



Updated 2035 Baseline with Recommended Improvements  
16: Beauregard St & Clyde's Restaurant/Highview Ln

PM PEAK  
10/22/2011

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL  | NBT   | SBL  | SBT   |
|-------------------------|-------|-------|-------|-------|------|-------|------|-------|
| Protected Phases        |       | 4     |       | 4     | 5    | 2     | 1    | 6     |
| Permitted Phases        | 4     |       | 4     |       | 2    |       | 6    |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 4.0  | 10.0  | 4.0  | 10.0  |
| Minimum Split (s)       | 31.0  | 31.0  | 31.0  | 31.0  | 9.0  | 31.0  | 9.0  | 31.0  |
| Total Split (s)         | 31.0  | 31.0  | 31.0  | 31.0  | 9.0  | 70.0  | 9.0  | 70.0  |
| Total Split (%)         | 28.2% | 28.2% | 28.2% | 28.2% | 8.2% | 63.6% | 8.2% | 63.6% |
| Maximum Green (s)       | 25.0  | 25.0  | 25.0  | 25.0  | 4.0  | 64.0  | 4.0  | 64.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 2.0  | 2.0   | 2.0  | 2.0   |
| Lead/Lag                |       |       |       |       | Lead | Lag   | Lead | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |      |       |      |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0  | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0  | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None | C-Max | None | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   |      | 7.0   |      | 7.0   |
| Flash Dont Walk (s)     | 18.0  | 18.0  | 18.0  | 18.0  |      | 18.0  |      | 18.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     |      | 0     |      | 0     |
| 90th %ile Green (s)     | 14.8  | 14.8  | 14.8  | 14.8  | 6.7  | 72.2  | 6.0  | 71.5  |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap  | Coord | Gap  | Coord |
| 70th %ile Green (s)     | 12.1  | 12.1  | 12.1  | 12.1  | 6.2  | 85.9  | 0.0  | 74.7  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap  | Coord | Skip | Coord |
| 50th %ile Green (s)     | 10.3  | 10.3  | 10.3  | 10.3  | 5.9  | 87.7  | 0.0  | 76.8  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap  | Coord | Skip | Coord |
| 30th %ile Green (s)     | 8.4   | 8.4   | 8.4   | 8.4   | 0.0  | 89.6  | 0.0  | 89.6  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Skip | Coord | Skip | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 104.0 | 0.0  | 104.0 |
| 10th %ile Term Code     | Skip  | Skip  | Skip  | Skip  | Skip | Coord | Skip | Coord |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 8 (7%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
 18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent

PM PEAK  
 10/22/2011

| Lane Group          | EBL   | EBT   | EBR   | WBL  | WBT   | WBR  | NBL   | NBT  | NBR  | SBL   | SBT  | SBR   |
|---------------------|-------|-------|-------|------|-------|------|-------|------|------|-------|------|-------|
| Lane Configurations | ↔     | ↔     | ↔     | ↔    | ↔     | ↔    | ↔     | ↔    | ↔    | ↔     | ↔    | ↔     |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12    | 12   | 12    | 12   | 12    | 12   | 12   | 12    | 12   | 12    |
| Grade (%)           |       | 0%    |       |      | 0%    |      |       | 0%   |      |       | 0%   |       |
| Storage Length (ft) | 235   |       | 0     | 0    |       | 20   | 235   |      | 0    | 150   |      | 170   |
| Storage Lanes       | 1     |       | 1     | 0    |       | 1    | 1     |      | 0    | 1     |      | 1     |
| Taper Length (ft)   | 50    |       |       | 50   |       |      | 50    |      |      | 50    |      |       |
| Lane Util. Factor   | 0.95  | 0.95  | 1.00  | 1.00 | 1.00  | 1.00 | 0.97  | 0.95 | 0.95 | 1.00  | 0.95 | 1.00  |
| Ped Bike Factor     |       |       |       |      |       |      | 0.97  |      |      |       |      | 0.98  |
| Frt                 |       |       | 0.850 |      |       |      | 0.850 |      |      | 0.995 |      | 0.850 |
| Flt Protected       | 0.950 | 0.990 |       |      | 0.969 |      | 0.950 |      |      | 0.950 |      |       |
| Satd. Flow (prot)   | 1681  | 1752  | 1583  | 0    | 1805  | 1583 | 3433  | 3522 | 0    | 1770  | 3539 | 1417  |
| Flt Permitted       | 0.950 | 0.990 |       |      | 0.969 |      | 0.950 |      |      | 0.950 |      |       |
| Satd. Flow (perm)   | 1681  | 1752  | 1583  | 0    | 1805  | 1540 | 3433  | 3522 | 0    | 1770  | 3539 | 1382  |
| Right Turn on Red   |       |       | Yes   |      | Yes   |      | Yes   |      | Yes  |       | Yes  |       |
| Satd. Flow (RTOR)   |       |       | 619   |      |       | 6    |       | 3    |      |       |      | 199   |
| Link Speed (mph)    |       | 35    |       |      | 15    |      |       |      | 35   |       |      | 35    |
| Link Distance (ft)  |       | 1573  |       |      | 252   |      |       | 414  |      |       |      | 921   |
| Travel Time (s)     |       | 30.6  |       |      | 11.5  |      |       | 8.1  |      |       |      | 17.9  |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
 18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent

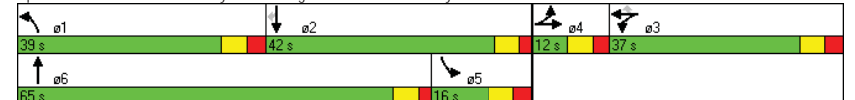
PM PEAK  
 10/22/2011

| Lane Group           | EBL   | EBT  | EBR   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔    | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 80    | 55   | 840   | 60    | 15    | 810   | 655   | 75    | 890   | 305   |
| Turn Type            | Split | NA   | Free  | NA    | Perm  | Prot  | NA    | Prot  | NA    | Perm  |
| Protected Phases     | 4     | 4    |       | 3     |       | 1     | 6     | 5     | 2     |       |
| Permitted Phases     |       |      | Free  |       | 3     |       |       |       |       | 2     |
| Detector Phase       | 4     | 4    |       | 3     | 3     | 1     | 6     | 5     | 2     | 2     |
| Switch Phase         |       |      |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 5.0  |       | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 11.5  | 11.5 |       | 37.0  | 37.0  | 12.0  | 11.0  | 12.0  | 24.0  | 24.0  |
| Total Split (s)      | 12.0  | 12.0 | 0.0   | 37.0  | 37.0  | 39.0  | 65.0  | 16.0  | 42.0  | 42.0  |
| Total Split (%)      | 9.2%  | 9.2% | 0.0%  | 28.5% | 28.5% | 30.0% | 50.0% | 12.3% | 32.3% | 32.3% |
| Yellow Time (s)      | 4.0   | 4.0  |       | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 2.5   | 2.5  |       | 3.0   | 3.0   | 3.0   | 2.0   | 3.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.5  | -2.5 | -2.5  | -3.0  | -3.0  | -3.0  | -2.0  | -3.0  | -2.0  | -2.0  |
| Total Lost Time (s)  | 4.0   | 4.0  | 1.5   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lead |       | Lag   | Lag   | Lead  | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?   |       |      |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None |       | None  | None  | Min   | Min   | None  | None  | None  |
| Act Effct Green (s)  | 8.0   | 8.0  | 116.6 | 21.0  | 21.0  | 34.5  | 43.0  | 31.7  | 37.0  | 37.0  |
| Actuated g/C Ratio   | 0.07  | 0.07 | 1.00  | 0.18  | 0.18  | 0.30  | 0.37  | 0.27  | 0.32  | 0.32  |
| v/c Ratio            | 0.61  | 0.61 | 0.57  | 0.55  | 0.06  | 0.86  | 0.56  | 0.17  | 0.85  | 0.57  |
| Control Delay        | 77.7  | 76.8 | 1.5   | 50.1  | 29.5  | 49.2  | 35.3  | 34.0  | 46.6  | 17.8  |
| Queue Delay          | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 77.7  | 76.8 | 1.5   | 50.1  | 29.5  | 49.2  | 35.3  | 34.0  | 46.6  | 17.8  |
| LOS                  | E     | E    | A     | D     | C     | D     | D     | C     | D     | B     |
| Approach Delay       |       | 12.0 |       | 48.4  |       |       | 42.9  |       | 39.0  |       |
| Approach LOS         |       | B    |       | D     |       |       | D     |       | D     |       |

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 116.6  
 Natural Cycle: 115  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 34.2  
 Intersection LOS: C  
 Intersection Capacity Utilization 76.4%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent



Updated 2035 Baseline with Recommended Improvements  
 18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent

PM PEAK  
 10/22/2011

| Lane Group              | EBL  | EBT  | EBR  | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   | SBR   |
|-------------------------|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 4    | 4    |      | 3     |       | 1     | 6     | 5     | 2     |       |
| Permitted Phases        |      |      | Free |       | 3     |       |       |       |       | 2     |
| Minimum Initial (s)     | 5.0  | 5.0  |      | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)       | 11.5 | 11.5 |      | 37.0  | 37.0  | 12.0  | 11.0  | 12.0  | 24.0  | 24.0  |
| Total Split (s)         | 12.0 | 12.0 | 0.0  | 37.0  | 37.0  | 39.0  | 65.0  | 16.0  | 42.0  | 42.0  |
| Total Split (%)         | 9.2% | 9.2% | 0.0% | 28.5% | 28.5% | 30.0% | 50.0% | 12.3% | 32.3% | 32.3% |
| Maximum Green (s)       | 5.5  | 5.5  |      | 30.0  | 30.0  | 32.0  | 59.0  | 9.0   | 36.0  | 36.0  |
| Yellow Time (s)         | 4.0  | 4.0  |      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 2.5  | 2.5  |      | 3.0   | 3.0   | 3.0   | 2.0   | 3.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead | Lead |      | Lag   | Lag   | Lead  | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      |      |      |      |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0  | 3.0  |      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0  | 3.0  |      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0  | 0.0  |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0  |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | None |      | None  | None  | Min   | Min   | None  | None  | None  |
| Walk Time (s)           | 7.0  | 7.0  |      | 7.0   | 7.0   |       |       | 7.0   | 7.0   |       |
| Flash Dont Walk (s)     |      |      |      | 23.0  | 23.0  |       |       | 11.0  | 11.0  |       |
| Pedestrian Calls (#/hr) |      |      |      | 5     | 5     |       |       | 0     | 0     |       |
| 90th %ile Green (s)     | 5.5  | 5.5  |      | 30.0  | 30.0  | 32.0  | 42.0  | 26.0  | 36.0  | 36.0  |
| 90th %ile Term Code     | Max  | Max  |      | Ped   | Ped   | Max   | Gap   | Hold  | Max   | Max   |
| 70th %ile Green (s)     | 5.5  | 5.5  |      | 19.5  | 19.5  | 32.0  | 34.0  | 34.0  | 36.0  | 36.0  |
| 70th %ile Term Code     | Max  | Max  |      | Gap   | Gap   | Max   | Gap   | Hold  | Max   | Max   |
| 50th %ile Green (s)     | 5.5  | 5.5  |      | 16.9  | 16.9  | 32.0  | 30.8  | 37.2  | 36.0  | 36.0  |
| 50th %ile Term Code     | Max  | Max  |      | Gap   | Gap   | Max   | Gap   | Hold  | Max   | Max   |
| 30th %ile Green (s)     | 5.5  | 5.5  |      | 14.3  | 14.3  | 32.0  | 26.9  | 41.1  | 36.0  | 36.0  |
| 30th %ile Term Code     | Max  | Max  |      | Gap   | Gap   | Max   | Gap   | Hold  | Max   | Max   |
| 10th %ile Green (s)     | 5.5  | 5.5  |      | 10.9  | 10.9  | 29.1  | 66.6  | 0.0   | 30.5  | 30.5  |
| 10th %ile Term Code     | Max  | Max  |      | Gap   | Gap   | Gap   | Hold  | Skip  | Gap   | Gap   |

Intersection Summary

|                                      |
|--------------------------------------|
| Cycle Length: 130                    |
| Actuated Cycle Length: 116.6         |
| Control Type: Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: 130        |
| 70th %ile Actuated Cycle: 119.5      |
| 50th %ile Actuated Cycle: 116.9      |
| 30th %ile Actuated Cycle: 114.3      |
| 10th %ile Actuated Cycle: 102.5      |

Updated 2035 Baseline with Recommended Improvements  
 20: Hampton Dr & Braddock Rd

PM PEAK  
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| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL  | NBT   | NBR   | SBL  | SBT  | SBR   |
|---------------------|-------|-------|------|-------|-------|------|------|-------|-------|------|------|-------|
| Lane Configurations |       |       |      |       |       |      |      |       |       |      |      |       |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   | 12   | 12    | 12    | 12   | 12   | 12    |
| Grade (%)           |       | 0%    |      |       | 0%    |      |      | 0%    |       |      | 0%   |       |
| Storage Length (ft) | 170   |       | 0    | 125   |       | 0    | 0    |       | 0     | 0    |      | 0     |
| Storage Lanes       | 1     |       | 0    | 1     |       | 0    | 0    |       | 1     | 0    |      | 1     |
| Taper Length (ft)   | 50    |       |      | 50    |       |      | 50   |       |       | 50   |      |       |
| 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  |
| Ped Bike Factor     |       | 1.00  |      |       | 1.00  |      |      |       |       |      |      | 0.99  |
| Frt                 |       | 0.995 |      |       | 0.973 |      |      |       | 0.850 |      |      | 0.850 |
| Flt Protected       | 0.950 |       |      | 0.950 |       |      |      | 0.972 |       |      |      | 0.960 |
| Satd. Flow (prot)   | 1770  | 3520  | 0    | 1770  | 3436  | 0    | 0    | 1811  | 1583  | 0    | 1788 | 1583  |
| Flt Permitted       | 0.450 |       |      | 0.289 |       |      |      | 0.749 |       |      |      | 0.736 |
| Satd. Flow (perm)   | 838   | 3520  | 0    | 538   | 3436  | 0    | 0    | 1395  | 1583  | 0    | 1371 | 1562  |
| Right Turn on Red   |       |       | Yes  |       |       | Yes  |      |       | Yes   |      |      | Yes   |
| Satd. Flow (RTOR)   |       | 6     |      |       | 48    |      |      |       | 16    |      |      | 124   |
| Link Speed (mph)    |       | 35    |      |       | 35    |      |      | 25    |       |      |      | 25    |
| Link Distance (ft)  |       | 1885  |      |       | 1164  |      |      | 416   |       |      |      | 1404  |
| Travel Time (s)     |       | 36.7  |      |       | 22.7  |      |      | 11.3  |       |      |      | 38.3  |

Intersection Summary

|            |       |
|------------|-------|
| Area Type: | Other |
|------------|-------|

Updated 2035 Baseline with Recommended Improvements  
20: Hampton Dr & Braddock Rd

PM PEAK  
10/22/2011

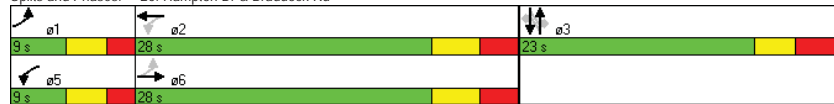


| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↕     | ↔     | ↕     | ↕     |
| Volume (vph)         | 65    | 750   | 35    | 390   | 20    | 15    | 15    | 215   | 45    | 115   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | Perm  | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     |       | 3     |       |       | 3     |       |
| Permitted Phases     | 6     |       | 2     |       | 3     |       | 3     | 3     |       | 3     |
| Detector Phase       | 1     | 6     | 5     | 2     | 3     | 3     | 3     | 3     | 3     | 3     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 9.0   | 16.5  | 9.0   | 16.5  | 12.0  | 12.0  | 12.0  | 12.0  | 12.0  | 12.0  |
| Total Split (s)      | 9.0   | 28.0  | 9.0   | 28.0  | 23.0  | 23.0  | 23.0  | 23.0  | 23.0  | 23.0  |
| Total Split (%)      | 15.0% | 46.7% | 15.0% | 46.7% | 38.3% | 38.3% | 38.3% | 38.3% | 38.3% | 38.3% |
| Yellow Time (s)      | 3.0   | 3.5   | 3.0   | 3.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| 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)  | 5.0   | 6.5   | 5.0   | 6.5   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 32.0  | 28.9  | 31.0  | 27.1  | 15.0  | 15.0  |       | 15.0  | 15.0  |       |
| Actuated g/C Ratio   | 0.53  | 0.48  | 0.52  | 0.45  | 0.25  | 0.25  |       | 0.25  | 0.25  |       |
| v/c Ratio            | 0.14  | 0.49  | 0.10  | 0.32  | 0.11  | 0.04  |       | 0.82  | 0.26  |       |
| Control Delay        | 7.6   | 13.4  | 5.8   | 8.9   | 17.0  | 8.7   |       | 41.4  | 5.4   |       |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       |
| Total Delay          | 7.6   | 13.4  | 5.8   | 8.9   | 17.0  | 8.7   |       | 41.4  | 5.4   |       |
| LOS                  | A     | B     | A     | A     | B     | A     |       | D     | A     |       |
| Approach Delay       |       | 13.0  |       | 8.7   |       | 14.6  |       |       | 30.3  |       |
| Approach LOS         |       | B     |       | A     |       | B     |       |       | C     |       |

Intersection Summary


Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 8 (13%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay: 15.5  
 Intersection LOS: B  
 Intersection Capacity Utilization 60.5%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 20: Hampton Dr & Braddock Rd



Updated 2035 Baseline with Recommended Improvements  
20: Hampton Dr & Braddock Rd

PM PEAK  
10/22/2011



| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 1     | 6     | 5     | 2     |       | 3     |       |       | 3     |       |
| Permitted Phases        | 6     |       | 2     |       | 3     |       | 3     | 3     |       | 3     |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 9.0   | 16.5  | 9.0   | 16.5  | 12.0  | 12.0  | 12.0  | 12.0  | 12.0  | 12.0  |
| Total Split (s)         | 9.0   | 28.0  | 9.0   | 28.0  | 23.0  | 23.0  | 23.0  | 23.0  | 23.0  | 23.0  |
| Total Split (%)         | 15.0% | 46.7% | 15.0% | 46.7% | 38.3% | 38.3% | 38.3% | 38.3% | 38.3% | 38.3% |
| Maximum Green (s)       | 4.0   | 21.5  | 4.0   | 21.5  | 17.0  | 17.0  | 17.0  | 17.0  | 17.0  | 17.0  |
| Yellow Time (s)         | 3.0   | 3.5   | 3.0   | 3.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   |       |       |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 4.0   | 2.0   | 4.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  | None  |
| Walk Time (s)           |       |       |       |       | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |       |       |       | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  |
| Pedestrian Calls (#/hr) |       |       |       |       | 0     | 0     | 0     | 0     | 0     | 0     |
| 90th %ile Green (s)     | 4.0   | 21.5  | 4.0   | 21.5  | 17.0  | 17.0  | 17.0  | 17.0  | 17.0  | 17.0  |
| 90th %ile Term Code     | Max   | Coord | Max   | Coord | Max   | Max   | Max   | Max   | Max   | Max   |
| 70th %ile Green (s)     | 4.0   | 21.5  | 4.0   | 21.5  | 17.0  | 17.0  | 17.0  | 17.0  | 17.0  | 17.0  |
| 70th %ile Term Code     | Max   | Coord | Max   | Coord | Max   | Max   | Max   | Max   | Max   | Max   |
| 50th %ile Green (s)     | 4.1   | 30.6  | 0.0   | 21.5  | 16.9  | 16.9  | 16.9  | 16.9  | 16.9  | 16.9  |
| 50th %ile Term Code     | Max   | Coord | Skip  | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |
| 30th %ile Green (s)     | 0.0   | 33.4  | 0.0   | 33.4  | 14.1  | 14.1  | 14.1  | 14.1  | 14.1  | 14.1  |
| 30th %ile Term Code     | Skip  | Coord | Skip  | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |
| 10th %ile Green (s)     | 0.0   | 37.6  | 0.0   | 37.6  | 9.9   | 9.9   | 9.9   | 9.9   | 9.9   | 9.9   |
| 10th %ile Term Code     | Skip  | Coord | Skip  | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 8 (13%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
23: Library Ln & Seminary Rd

PM PEAK  
10/22/2011

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL  | NBT   | NBR  | SBL   | SBT   | SBR  |
|---------------------|-------|-------|------|-------|-------|------|------|-------|------|-------|-------|------|
| Lane Configurations | ↔     | ↕     | ↔    | ↔     | ↕     | ↔    | ↔    | ↕     | ↔    | ↔     | ↕     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   | 12   | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           | 0%    |       | 0%   |       | 0%    |      | 0%   |       | 0%   |       | 0%    |      |
| Storage Length (ft) | 150   |       | 0    | 45    |       | 0    | 0    |       | 0    | 0     |       | 0    |
| Storage Lanes       | 1     |       | 1    | 1     |       | 0    | 0    |       | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50    |       |      | 50    |       |      | 50   |       |      | 50    |       |      |
| Lane Util. Factor   | 1.00  | 0.95  | 1.00 | 1.00  | 0.91  | 0.91 | 1.00 | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 |
| Ped Bike Factor     | 1.00  |       | 0.91 | 0.99  | 1.00  |      |      | 0.89  |      | 0.99  |       | 0.89 |
| Frt                 |       | 0.850 |      |       | 0.992 |      |      | 0.987 |      |       | 0.894 |      |
| Flt Protected       | 0.950 |       |      | 0.950 |       |      |      | 0.961 |      | 0.950 |       |      |
| Satd. Flow (prot)   | 1770  | 3539  | 1583 | 1770  | 5038  | 0    | 0    | 1763  | 0    | 1770  | 1486  | 0    |
| Flt Permitted       | 0.298 |       |      | 0.170 |       |      |      | 0.730 |      | 0.758 |       |      |
| Satd. Flow (perm)   | 555   | 3539  | 1442 | 313   | 5038  | 0    | 0    | 1194  | 0    | 1398  | 1486  | 0    |
| Right Turn on Red   |       |       | Yes  |       |       | No   |      |       | Yes  |       |       | Yes  |
| Satd. Flow (RTOR)   |       | 17    |      |       |       |      |      | 3     |      |       | 38    |      |
| Link Speed (mph)    |       | 35    |      |       | 35    |      |      | 35    |      |       | 25    |      |
| Link Distance (ft)  |       | 248   |      |       | 471   |      |      | 634   |      |       | 705   |      |
| Travel Time (s)     |       | 4.8   |      |       | 9.2   |      |      | 12.4  |      |       | 19.2  |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
23: Library Ln & Seminary Rd

PM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | EBR    | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | ø9   |
|----------------------|-------|-------|--------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations  | ↔     | ↕     | ↔      | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↔    |
| Volume (vph)         | 240   | 1410  | 20     | 30    | 745   | 40    | 5     | 90    | 15    |      |
| Turn Type            | pm+pt | NA    | custom | Perm  | NA    | Perm  | NA    | Perm  | NA    |      |
| Protected Phases     | 1     | 6     |        |       | 2     |       | 4     |       | 8     | 9    |
| Permitted Phases     | 6     |       | 2 6    | 2     |       | 4     |       |       | 8     |      |
| Detector Phase       | 1     | 6     | 2 6    | 2     | 2     | 4     | 4     | 8     | 8     |      |
| Switch Phase         |       |       |        |       |       |       |       |       |       |      |
| Minimum Initial (s)  | 7.0   | 30.0  |        | 30.0  | 30.0  | 8.0   | 8.0   | 8.0   | 8.0   | 4.0  |
| Minimum Split (s)    | 12.0  | 36.0  |        | 36.0  | 36.0  | 21.0  | 21.0  | 21.0  | 21.0  | 31.0 |
| Total Split (s)      | 27.0  | 93.0  | 159.0  | 66.0  | 66.0  | 26.0  | 26.0  | 26.0  | 26.0  | 31.0 |
| Total Split (%)      | 18.0% | 62.0% | 106.0% | 44.0% | 44.0% | 17.3% | 17.3% | 17.3% | 17.3% | 21%  |
| Yellow Time (s)      | 3.0   | 3.5   |        | 3.5   | 3.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| All-Red Time (s)     | 2.0   | 2.5   |        | 2.5   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0   | 0.0  |
| 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)  | 5.0   | 6.0   | 6.0    | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0  |
| Lead/Lag             | Lead  |       |        | Lag   |       | Lag   |       |       |       |      |
| Lead-Lag Optimize?   |       |       |        |       |       |       |       |       |       |      |
| Recall Mode          | None  | C-Max |        | C-Max | C-Max | None  | None  | None  | None  | None |
| Act Effct Green (s)  | 123.7 | 122.7 | 122.7  | 107.4 | 107.4 |       | 15.3  | 15.3  | 15.3  |      |
| Actuated g/C Ratio   | 0.82  | 0.82  | 0.82   | 0.72  | 0.72  |       | 0.10  | 0.10  | 0.10  |      |
| v/c Ratio            | 0.48  | 0.52  | 0.02   | 0.14  | 0.24  |       | 0.43  | 0.68  | 0.29  |      |
| Control Delay        | 6.0   | 5.4   | 1.6    | 3.9   | 2.2   |       | 68.8  | 87.5  | 28.7  |      |
| Queue Delay          | 0.0   | 0.0   | 0.0    | 0.0   | 0.1   |       | 0.0   | 0.0   | 0.0   |      |
| Total Delay          | 6.0   | 5.4   | 1.6    | 3.9   | 2.3   |       | 68.8  | 87.5  | 28.7  |      |
| LOS                  | A     | A     | A      | A     | A     |       | E     | F     | C     |      |
| Approach Delay       | 5.5   |       | 2.4    |       | 68.8  |       | 66.5  |       |       |      |
| Approach LOS         | A     |       | A      |       | E     |       | E     |       |       |      |

Intersection Summary

Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 137 (91%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.68  
 Intersection Signal Delay: 8.9  
 Intersection LOS: A  
 Intersection Capacity Utilization 88.5%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 23: Library Ln & Seminary Rd



Updated 2035 Baseline with Recommended Improvements  
23: Library Ln & Seminary Rd

PM PEAK  
10/22/2011

| Lane Group              | EBL   | EBT   | EBR    | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | o9   |
|-------------------------|-------|-------|--------|-------|-------|-------|-------|-------|-------|------|
| Protected Phases        | 1     | 6     |        |       | 2     |       | 4     |       | 8     | 9    |
| Permitted Phases        | 6     |       | 2 6    | 2     |       | 4     |       | 8     |       |      |
| Minimum Initial (s)     | 7.0   | 30.0  |        | 30.0  | 30.0  | 8.0   | 8.0   | 8.0   | 8.0   | 4.0  |
| Minimum Split (s)       | 12.0  | 36.0  |        | 36.0  | 36.0  | 21.0  | 21.0  | 21.0  | 21.0  | 31.0 |
| Total Split (s)         | 27.0  | 93.0  | 159.0  | 66.0  | 66.0  | 26.0  | 26.0  | 26.0  | 26.0  | 31.0 |
| Total Split (%)         | 18.0% | 62.0% | 106.0% | 44.0% | 44.0% | 17.3% | 17.3% | 17.3% | 17.3% | 21%  |
| Maximum Green (s)       | 22.0  | 87.0  |        | 60.0  | 60.0  | 20.0  | 20.0  | 20.0  | 20.0  | 28.0 |
| Yellow Time (s)         | 3.0   | 3.5   |        | 3.5   | 3.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| All-Red Time (s)        | 2.0   | 2.5   |        | 2.5   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0   | 0.0  |
| Lead/Lag                | Lead  |       |        | Lag   | Lag   |       |       |       |       |      |
| Lead-Lag Optimize?      |       |       |        |       |       |       |       |       |       |      |
| Vehicle Extension (s)   | 3.0   | 3.0   |        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| Minimum Gap (s)         | 3.0   | 3.0   |        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| Time Before Reduce (s)  | 0.0   | 0.0   |        | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Time To Reduce (s)      | 0.0   | 0.0   |        | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Recall Mode             | None  | C-Max |        | C-Max | C-Max | None  | None  | None  | None  | None |
| Walk Time (s)           |       |       |        |       |       |       |       |       |       | 4.0  |
| Flash Dont Walk (s)     |       |       |        |       |       |       |       |       |       | 24.0 |
| Pedestrian Calls (#/hr) |       |       |        |       |       |       |       |       |       | 0    |
| 90th %ile Green (s)     | 13.8  | 118.0 |        | 99.2  | 99.2  | 20.0  | 20.0  | 20.0  | 20.0  | 0.0  |
| 90th %ile Term Code     | Gap   | Coord |        | Coord | Coord | Hold  | Hold  | Max   | Max   | Skip |
| 70th %ile Green (s)     | 11.4  | 119.6 |        | 103.2 | 103.2 | 18.4  | 18.4  | 18.4  | 18.4  | 0.0  |
| 70th %ile Term Code     | Gap   | Coord |        | Coord | Coord | Hold  | Hold  | Gap   | Gap   | Skip |
| 50th %ile Green (s)     | 10.0  | 122.2 |        | 107.2 | 107.2 | 15.8  | 15.8  | 15.8  | 15.8  | 0.0  |
| 50th %ile Term Code     | Gap   | Coord |        | Coord | Coord | Hold  | Hold  | Gap   | Gap   | Skip |
| 30th %ile Green (s)     | 8.8   | 124.9 |        | 111.1 | 111.1 | 13.1  | 13.1  | 13.1  | 13.1  | 0.0  |
| 30th %ile Term Code     | Gap   | Coord |        | Coord | Coord | Hold  | Hold  | Gap   | Gap   | Skip |
| 10th %ile Green (s)     | 7.4   | 128.8 |        | 116.4 | 116.4 | 9.2   | 9.2   | 9.2   | 9.2   | 0.0  |
| 10th %ile Term Code     | Gap   | Coord |        | Coord | Coord | Hold  | Hold  | Gap   | Gap   | Skip |

Intersection Summary

Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 137 (91%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
33: Seminary Rd (S)/Seminary Rd (N) & Seminary Rd

PM PEAK  
10/22/2011

| Lane Group                | EBL  | EBT  | EBR  | WBL  | WBT   | WBR   | NBL  | NBT  | NBR   | SBL  | SBT  | SBR  |
|---------------------------|------|------|------|------|-------|-------|------|------|-------|------|------|------|
| Lane Configurations       |      | ↑↑   |      |      | ↑↑    | ↑↑    |      |      | ↑     |      |      |      |
| Ideal Flow (vphpl)        | 1900 | 1900 | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)           | 12   | 12   | 12   | 12   | 12    | 12    | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)                 |      | 0%   |      |      | 0%    |       |      | 0%   |       |      | 0%   |      |
| Storage Length (ft)       | 0    |      | 0    | 0    |       | 0     | 0    |      | 0     | 0    |      | 0    |
| Storage Lanes             | 0    |      | 0    | 0    |       | 1     | 0    |      | 1     | 0    |      | 0    |
| Taper Length (ft)         | 50   |      |      | 50   |       |       | 50   |      |       | 50   |      |      |
| Lane Util. Factor         | 1.00 | 0.95 | 1.00 | 1.00 | 0.91  | 0.91  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor           |      |      |      |      |       |       |      |      |       |      |      |      |
| Fr <sub>t</sub>           |      |      |      |      | 0.959 | 0.850 |      |      | 0.865 |      |      |      |
| Fl <sub>t</sub> Protected |      |      |      |      |       |       |      |      |       |      |      |      |
| Satd. Flow (prot)         | 0    | 3539 | 0    | 0    | 3251  | 1441  | 0    | 0    | 1611  | 0    | 0    | 0    |
| Fl <sub>t</sub> Permitted |      |      |      |      |       |       |      |      |       |      |      |      |
| Satd. Flow (perm)         | 0    | 3539 | 0    | 0    | 3251  | 1441  | 0    | 0    | 1611  | 0    | 0    | 0    |
| Link Speed (mph)          |      | 35   |      |      | 35    |       |      | 35   |       |      | 30   |      |
| Link Distance (ft)        |      | 826  |      |      | 105   |       |      | 418  |       |      | 284  |      |
| Travel Time (s)           |      | 16.1 |      |      | 2.0   |       |      | 8.1  |       |      | 6.5  |      |

Intersection Summary

Area Type: Other



| Lane Group          | WBL   | WBR   | NBT   | NBR  | SBL  | SBT   |
|---------------------|-------|-------|-------|------|------|-------|
| Lane Configurations | ↔     | ↔     | ↕     | ↕    | ↔    | ↔     |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900  | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12    | 12   | 12   | 12    |
| Grade (%)           | 0%    |       | 0%    |      |      | 0%    |
| Storage Length (ft) | 0     | 50    |       | 0    | 0    |       |
| Storage Lanes       | 1     | 1     |       | 0    | 0    |       |
| Taper Length (ft)   | 50    |       |       |      | 50   |       |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95  | 0.95 | 0.95 | 0.95  |
| Ped Bike Factor     |       | 0.99  | 0.99  |      |      |       |
| Frt                 |       | 0.850 | 0.982 |      |      |       |
| Flt Protected       | 0.950 |       |       |      |      | 0.998 |
| Satd. Flow (prot)   | 1770  | 1583  | 3458  | 0    | 0    | 3532  |
| Flt Permitted       | 0.950 |       |       |      |      | 0.875 |
| Satd. Flow (perm)   | 1770  | 1561  | 3458  | 0    | 0    | 3097  |
| Right Turn on Red   |       | Yes   |       | Yes  |      |       |
| Satd. Flow (RTOR)   |       | 15    | 17    |      |      |       |
| Link Speed (mph)    | 30    |       | 35    |      |      | 35    |
| Link Distance (ft)  | 805   |       | 2951  |      |      | 2586  |
| Travel Time (s)     | 18.3  |       | 57.5  |      |      | 50.4  |

Intersection Summary

Area Type: Other

| Lane Group           | WBL   | WBR   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↕     | ↕     | ↔     |
| Volume (vph)         | 385   | 60    | 690   | 45    | 1435  |
| Turn Type            | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 2     |       | 1     |       | 1     |
| Permitted Phases     |       | 2     |       | 1     |       |
| Detector Phase       | 2     | 2     | 1     | 1     | 1     |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)    | 27.5  | 27.5  | 29.0  | 29.0  | 29.0  |
| Total Split (s)      | 59.0  | 59.0  | 111.0 | 111.0 | 111.0 |
| Total Split (%)      | 34.7% | 34.7% | 65.3% | 65.3% | 65.3% |
| Yellow Time (s)      | 3.5   | 3.5   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.5   | 5.5   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             | Lag   | Lag   | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?   |       |       |       |       |       |
| Recall Mode          | None  | None  | C-Max | C-Max | C-Max |
| Act Effct Green (s)  | 45.4  | 45.4  | 113.1 |       | 113.1 |
| Actuated g/C Ratio   | 0.27  | 0.27  | 0.67  |       | 0.67  |
| v/c Ratio            | 0.88  | 0.15  | 0.37  |       | 0.77  |
| Control Delay        | 78.8  | 35.0  | 13.3  |       | 24.1  |
| Queue Delay          | 0.0   | 0.0   | 0.0   |       | 0.0   |
| Total Delay          | 78.8  | 35.0  | 13.3  |       | 24.1  |
| LOS                  | E     | D     | B     |       | C     |
| Approach Delay       | 72.8  |       | 13.3  |       | 24.1  |
| Approach LOS         | E     |       | B     |       | C     |

Intersection Summary

Cycle Length: 170  
 Actuated Cycle Length: 170  
 Offset: 121 (71%), Referenced to phase 1:NBSB, Start of Green  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.88  
 Intersection Signal Delay: 29.0  
 Intersection Capacity Utilization 99.1%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service F

Splits and Phases: 41: Van Dorn St & Kenmore Ave



Updated 2035 Baseline with Recommended Improvements  
41: Van Dorn St & Kenmore Ave

PM PEAK  
10/22/2011

| Lane Group              | WBL   | WBR   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|
| Protected Phases        | 2     |       | 1     |       | 1     |
| Permitted Phases        |       | 2     |       | 1     |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 27.5  | 27.5  | 29.0  | 29.0  | 29.0  |
| Total Split (s)         | 59.0  | 59.0  | 111.0 | 111.0 | 111.0 |
| Total Split (%)         | 34.7% | 34.7% | 65.3% | 65.3% | 65.3% |
| Maximum Green (s)       | 53.5  | 53.5  | 105.0 | 105.0 | 105.0 |
| Yellow Time (s)         | 3.5   | 3.5   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lag   | Lag   | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?      |       |       |       |       |       |
| Vehicle Extension (s)   | 4.0   | 4.0   | 0.2   | 0.2   | 0.2   |
| Minimum Gap (s)         | 4.0   | 4.0   | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | C-Max | C-Max | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     | 15.0  | 15.0  | 16.0  | 16.0  | 16.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     |
| 90th %ile Green (s)     | 53.5  | 53.5  | 105.0 | 105.0 | 105.0 |
| 90th %ile Term Code     | Max   | Max   | Coord | Coord | Coord |
| 70th %ile Green (s)     | 51.1  | 51.1  | 107.4 | 107.4 | 107.4 |
| 70th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord |
| 50th %ile Green (s)     | 46.1  | 46.1  | 112.4 | 112.4 | 112.4 |
| 50th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord |
| 30th %ile Green (s)     | 41.6  | 41.6  | 116.9 | 116.9 | 116.9 |
| 30th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord |
| 10th %ile Green (s)     | 34.9  | 34.9  | 123.6 | 123.6 | 123.6 |
| 10th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord |

Intersection Summary

Cycle Length: 170  
 Actuated Cycle Length: 170  
 Offset: 121 (71%), Referenced to phase 1:NBSB, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
42: Van Dorn St & Sanger Ave/Richenbacher Ave

PM PEAK  
10/22/2011

| Lane Group          | EBL  | EBT   | EBR   | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|---------------------|------|-------|-------|-------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations |      |       |       |       |       |      |       |       |      |       |       |      |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12    | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           |      | 0%    |       |       | 0%    |      |       | 0%    |      |       |       | 0%   |
| Storage Length (ft) | 150  |       | 0     | 150   |       | 250  | 390   |       | 0    | 140   |       | 0    |
| Storage Lanes       | 0    |       | 1     | 1     |       | 0    | 1     |       | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50   |       |       | 50    |       |      | 50    |       |      | 50    |       |      |
| Lane Util. Factor   | 1.00 | 0.95  | 0.95  | 1.00  | 1.00  | 1.00 | 1.00  | 0.95  | 0.95 | 1.00  | 0.95  | 0.95 |
| Ped Bike Factor     |      | 0.97  | 0.95  |       | 0.99  |      |       | 1.00  |      |       | 1.00  |      |
| Frt                 |      | 0.921 | 0.850 |       | 0.952 |      |       | 0.992 |      |       | 0.989 |      |
| Flt Protected       |      | 0.989 |       | 0.950 |       |      | 0.950 |       |      | 0.950 |       |      |
| Satd. Flow (prot)   | 0    | 1571  | 1504  | 1770  | 1749  | 0    | 1770  | 3504  | 0    | 1770  | 3497  | 0    |
| Flt Permitted       |      | 0.989 |       | 0.950 |       |      | 0.056 |       |      | 0.413 |       |      |
| Satd. Flow (perm)   | 0    | 1571  | 1432  | 1770  | 1749  | 0    | 104   | 3504  | 0    | 769   | 3497  | 0    |
| Right Turn on Red   |      |       | No    |       |       | Yes  |       | Yes   |      |       | Yes   |      |
| Satd. Flow (RTOR)   |      |       |       |       | 11    |      |       | 5     |      |       | 5     |      |
| Link Speed (mph)    |      | 25    |       |       | 25    |      |       | 35    |      |       | 35    |      |
| Link Distance (ft)  |      | 775   |       |       | 1172  |      |       | 844   |      |       | 2951  |      |
| Travel Time (s)     |      | 21.1  |       |       | 32.0  |      |       | 16.4  |      |       | 57.5  |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
42: Van Dorn St & Sanger Ave/Richenbacher Ave

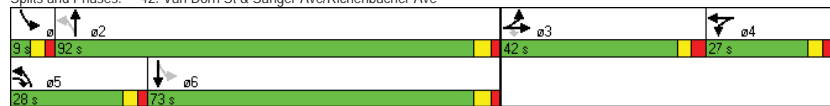
PM PEAK  
10/22/2011

| Lane Group           | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 90    | 545   | 20    | 75    | 325   | 555   | 45    | 1430  |
| Turn Type            | NA    | pm+ov | Split | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 3     | 5     | 4     | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases     |       | 3     |       |       | 2     |       | 6     |       |
| Detector Phase       | 3     | 5     | 4     | 4     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 10.0  | 8.0   | 10.0  | 10.0  | 8.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 27.0  | 13.0  | 27.0  | 27.0  | 13.0  | 27.0  | 9.0   | 27.0  |
| Total Split (s)      | 42.0  | 28.0  | 27.0  | 27.0  | 28.0  | 92.0  | 9.0   | 73.0  |
| Total Split (%)      | 24.7% | 16.5% | 15.9% | 15.9% | 16.5% | 54.1% | 5.3%  | 42.9% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 2.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 5.0   | 6.0   | 6.0   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             | Lead  | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | C-Max | None  | C-Max |       |
| Act Effct Green (s)  | 36.0  | 64.2  | 16.8  | 16.8  | 100.2 | 90.4  | 74.1  | 67.0  |
| Actuated g/C Ratio   | 0.21  | 0.38  | 0.10  | 0.10  | 0.59  | 0.53  | 0.44  | 0.39  |
| v/c Ratio            | 1.20  | 0.68  | 0.13  | 0.65  | 1.06  | 0.34  | 0.13  | 1.20  |
| Control Delay        | 169.1 | 35.2  | 69.4  | 82.7  | 128.9 | 22.2  | 16.9  | 132.7 |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 169.1 | 35.2  | 69.4  | 82.7  | 128.9 | 22.2  | 16.9  | 132.7 |
| LOS                  | F     | D     | E     | F     | F     | C     | B     | F     |
| Approach Delay       | 104.2 |       |       | 80.6  |       | 60.3  |       | 129.4 |
| Approach LOS         | F     |       |       | F     |       | E     |       | F     |

Intersection Summary

Cycle Length: 170  
 Actuated Cycle Length: 170  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 145  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.20  
 Intersection Signal Delay: 103.3      Intersection LOS: F  
 Intersection Capacity Utilization 103.2%      ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 42: Van Dorn St & Sanger Ave/Richenbacher Ave



Updated 2035 Baseline with Recommended Improvements  
42: Van Dorn St & Sanger Ave/Richenbacher Ave

PM PEAK  
10/22/2011

| Lane Group              | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL  | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|------|-------|
| Protected Phases        | 3     | 5     | 4     | 4     | 5     | 2     | 1    | 6     |
| Permitted Phases        |       | 3     |       |       | 2     |       | 6    |       |
| Minimum Initial (s)     | 10.0  | 8.0   | 10.0  | 10.0  | 8.0   | 10.0  | 4.0  | 10.0  |
| Minimum Split (s)       | 27.0  | 13.0  | 27.0  | 27.0  | 13.0  | 27.0  | 9.0  | 27.0  |
| Total Split (s)         | 42.0  | 28.0  | 27.0  | 27.0  | 28.0  | 92.0  | 9.0  | 73.0  |
| Total Split (%)         | 24.7% | 16.5% | 15.9% | 15.9% | 16.5% | 54.1% | 5.3% | 42.9% |
| Maximum Green (s)       | 36.0  | 23.0  | 21.0  | 21.0  | 23.0  | 86.0  | 4.0  | 67.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)        | 3.0   | 2.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0  | 2.0   |
| Lead/Lag                | Lead  | Lead  | Lag   | Lag   | Lead  | Lag   | Lead | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |      |       |
| Vehicle Extension (s)   | 4.0   | 2.0   | 4.0   | 4.0   | 2.0   | 0.2   | 4.0  | 0.2   |
| Minimum Gap (s)         | 4.0   | 2.0   | 4.0   | 4.0   | 2.0   | 0.2   | 4.0  | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | C-Max | None | C-Max |
| Walk Time (s)           | 7.0   |       | 7.0   | 7.0   |       | 7.0   |      | 7.0   |
| Flash Dont Walk (s)     | 14.0  |       | 14.0  | 14.0  |       | 14.0  |      | 14.0  |
| Pedestrian Calls (#/hr) | 10    |       | 10    | 10    |       | 10    |      | 10    |
| 90th %ile Green (s)     | 36.0  | 23.0  | 21.0  | 21.0  | 23.0  | 86.0  | 4.0  | 67.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Coord | Max  | Coord |
| 70th %ile Green (s)     | 36.0  | 23.0  | 21.0  | 21.0  | 23.0  | 86.0  | 4.0  | 67.0  |
| 70th %ile Term Code     | Max   | Max   | Ped   | Ped   | Max   | Coord | Max  | Coord |
| 50th %ile Green (s)     | 36.0  | 27.1  | 16.9  | 16.9  | 27.1  | 86.0  | 8.1  | 67.0  |
| 50th %ile Term Code     | Max   | Max   | Gap   | Gap   | Max   | Coord | Max  | Coord |
| 30th %ile Green (s)     | 36.0  | 29.6  | 14.4  | 14.4  | 29.6  | 88.8  | 7.8  | 67.0  |
| 30th %ile Term Code     | Max   | Max   | Gap   | Gap   | Max   | Coord | Gap  | Coord |
| 10th %ile Green (s)     | 36.0  | 33.2  | 10.8  | 10.8  | 33.2  | 105.2 | 0.0  | 67.0  |
| 10th %ile Term Code     | Max   | Max   | Gap   | Gap   | Max   | Coord | Skip | Coord |

Intersection Summary

Cycle Length: 170  
 Actuated Cycle Length: 170  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
43: Van Dorn St/ Van Dorn St & Braddock Rd

PM PEAK  
10/22/2011

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT  | NBR  | SBL   | SBT  | SBR  |
|---------------------|-------|------|-------|-------|-------|------|-------|------|------|-------|------|------|
| Lane Configurations | ↔     | ↔    | ↔     | ↔     | ↔     | ↔    | ↔     | ↔    | ↔    | ↔     | ↔    | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12   | 12   | 12    | 12   | 12   |
| Grade (%)           | 0%    |      | 0%    |       | 0%    |      | 0%    |      | 0%   |       | 0%   |      |
| Storage Length (ft) | 40    |      | 0     | 140   |       | 0    | 250   |      | 0    | 150   |      | 0    |
| Storage Lanes       | 1     |      | 0     | 1     |       | 0    | 1     |      | 0    | 1     |      | 0    |
| Taper Length (ft)   | 50    |      |       | 50    |       |      | 100   |      |      | 50    |      |      |
| Lane Util. Factor   | 1.00  | 0.95 | 0.95  | 1.00  | 0.95  | 0.95 | 1.00  | 0.95 | 0.95 | 1.00  | 0.95 | 0.95 |
| Ped Bike Factor     | 0.99  |      | 1.00  |       | 0.99  |      | 0.99  |      | 1.00 |       | 0.99 |      |
| Frt                 | 0.917 |      | 0.986 |       | 0.910 |      | 0.994 |      |      |       |      |      |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      | 0.950 |      |      | 0.950 |      |      |
| Satd. Flow (prot)   | 1770  | 3210 | 0     | 1770  | 3483  | 0    | 1770  | 3186 | 0    | 1770  | 3516 | 0    |
| Flt Permitted       | 0.601 |      |       | 0.110 |       |      | 0.107 |      |      | 0.537 |      |      |
| Satd. Flow (perm)   | 1120  | 3210 | 0     | 205   | 3483  | 0    | 199   | 3186 | 0    | 1000  | 3516 | 0    |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |       |      | Yes  |       |      | Yes  |
| Satd. Flow (RTOR)   | 267   |      |       |       | 10    |      | 215   |      | 3    |       |      |      |
| Link Speed (mph)    | 35    |      |       |       | 35    |      | 35    |      | 35   |       |      |      |
| Link Distance (ft)  | 1164  |      |       |       | 1277  |      | 2586  |      | 1512 |       |      |      |
| Travel Time (s)     | 22.7  |      |       |       | 24.9  |      | 50.4  |      | 29.5 |       |      |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
43: Van Dorn St/ Van Dorn St & Braddock Rd

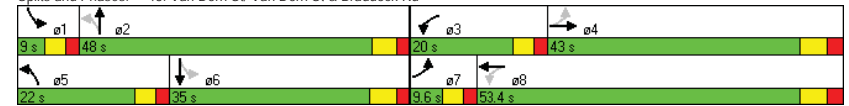
PM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 20    | 430   | 260   | 205   | 275   | 135   | 15    | 775   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 7.0   | 4.0   | 7.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 9.5   | 34.5  | 9.0   | 34.5  | 9.0   | 28.5  | 9.0   | 29.0  |
| Total Split (s)      | 9.6   | 43.0  | 20.0  | 53.4  | 22.0  | 48.0  | 9.0   | 35.0  |
| Total Split (%)      | 8.0%  | 35.8% | 16.7% | 44.5% | 18.3% | 40.0% | 7.5%  | 29.2% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.5   | 3.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.5   | 2.0   | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -5.0  | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.0   | 6.5   | 5.0   | 6.5   | 5.0   | 0.5   | 5.0   | 6.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | None  | None  | None  |
| Act Effct Green (s)  | 40.5  | 34.3  | 56.6  | 49.4  | 53.4  | 54.3  | 34.6  | 29.0  |
| Actuated g/C Ratio   | 0.34  | 0.29  | 0.47  | 0.41  | 0.44  | 0.45  | 0.29  | 0.24  |
| v/c Ratio            | 0.05  | 0.93  | 0.92  | 0.17  | 0.90  | 0.23  | 0.05  | 1.02  |
| Control Delay        | 13.0  | 37.6  | 65.1  | 22.3  | 62.7  | 9.0   | 21.3  | 79.8  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 13.0  | 37.6  | 65.1  | 22.3  | 62.7  | 9.0   | 21.3  | 79.8  |
| LOS                  | B     | D     | E     | C     | E     | A     | C     | E     |
| Approach Delay       | 37.1  |       | 45.3  |       | 33.2  |       | 78.7  |       |
| Approach LOS         | D     |       | D     |       | C     |       | E     |       |

Intersection Summary

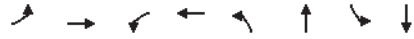
Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 72 (60%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 85  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.02  
 Intersection Signal Delay: 49.4  
 Intersection LOS: D  
 Intersection Capacity Utilization 99.7%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 43: Van Dorn St/ Van Dorn St & Braddock Rd



Updated 2035 Baseline with Recommended Improvements  
43: Van Dorn St/ Van Dorn St & Braddock Rd

PM PEAK  
10/22/2011



| Lane Group              | EBL  | EBT   | WBL   | WBT   | NBL   | NBT   | SBL  | SBT   |
|-------------------------|------|-------|-------|-------|-------|-------|------|-------|
| Protected Phases        | 7    | 4     | 3     | 8     | 5     | 2     | 1    | 6     |
| Permitted Phases        | 4    |       | 8     |       | 2     |       | 6    |       |
| Minimum Initial (s)     | 4.0  | 7.0   | 4.0   | 7.0   | 4.0   | 10.0  | 4.0  | 10.0  |
| Minimum Split (s)       | 9.5  | 34.5  | 9.0   | 34.5  | 9.0   | 28.5  | 9.0  | 29.0  |
| Total Split (s)         | 9.6  | 43.0  | 20.0  | 53.4  | 22.0  | 48.0  | 9.0  | 35.0  |
| Total Split (%)         | 8.0% | 35.8% | 16.7% | 44.5% | 18.3% | 40.0% | 7.5% | 29.2% |
| Maximum Green (s)       | 4.6  | 36.5  | 15.0  | 46.9  | 17.0  | 42.5  | 4.0  | 29.0  |
| Yellow Time (s)         | 3.0  | 4.0   | 3.0   | 4.0   | 3.0   | 3.5   | 3.0  | 4.0   |
| All-Red Time (s)        | 2.0  | 2.5   | 2.0   | 2.5   | 2.0   | 2.0   | 2.0  | 2.0   |
| Lead/Lag                | Lead | Lag   | Lead  | Lag   | Lead  | Lag   | Lead | Lag   |
| Lead-Lag Optimize?      |      |       |       |       |       |       |      |       |
| Vehicle Extension (s)   | 3.0  | 2.0   | 3.0   | 2.0   | 3.0   | 0.2   | 3.0  | 0.2   |
| Minimum Gap (s)         | 3.0  | 0.2   | 3.0   | 0.2   | 3.0   | 0.2   | 3.0  | 0.2   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None | C-Min | None  | C-Min | None  | None  | None | None  |
| Walk Time (s)           |      | 7.0   |       | 7.0   |       | 7.0   |      | 7.0   |
| Flash Dont Walk (s)     |      | 21.0  |       | 21.0  |       | 16.0  |      | 16.0  |
| Pedestrian Calls (#/hr) |      | 0     |       | 0     |       | 0     |      | 0     |
| 90th %ile Green (s)     | 4.6  | 36.5  | 15.0  | 46.9  | 17.0  | 42.5  | 4.0  | 29.0  |
| 90th %ile Term Code     | Max  | Coord | Max   | Coord | Max   | Hold  | Max  | Max   |
| 70th %ile Green (s)     | 4.6  | 36.5  | 15.0  | 46.9  | 17.0  | 42.5  | 4.0  | 29.0  |
| 70th %ile Term Code     | Max  | Coord | Max   | Coord | Max   | Hold  | Max  | Max   |
| 50th %ile Green (s)     | 4.6  | 36.5  | 15.0  | 46.9  | 17.0  | 51.5  | 0.0  | 29.0  |
| 50th %ile Term Code     | Max  | Coord | Max   | Coord | Max   | Hold  | Skip | Max   |
| 30th %ile Green (s)     | 0.0  | 34.2  | 15.0  | 54.2  | 19.3  | 53.8  | 0.0  | 29.0  |
| 30th %ile Term Code     | Skip | Coord | Max   | Coord | Max   | Hold  | Skip | Max   |
| 10th %ile Green (s)     | 0.0  | 27.6  | 19.4  | 52.0  | 21.5  | 56.0  | 0.0  | 29.0  |
| 10th %ile Term Code     | Skip | Coord | Gap   | Coord | Gap   | Hold  | Skip | Max   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 72 (60%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
47: Van Dorn St/Van Dorn St & Taney Ave

PM PEAK  
10/22/2011



| Lane Group          | WBL   | WBR   | NBT   | NBR  | SBL   | SBT  |
|---------------------|-------|-------|-------|------|-------|------|
| Lane Configurations |       |       |       |      |       |      |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |       | 0%    |      |       | 0%   |
| Storage Length (ft) | 0     | 85    |       | 0    | 180   |      |
| Storage Lanes       | 1     | 1     |       | 0    | 1     |      |
| Taper Length (ft)   | 50    |       |       |      | 50    |      |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95  | 0.95 | 1.00  | 0.95 |
| Ped Bike Factor     |       | 0.99  | 0.98  |      |       |      |
| Frt                 |       | 0.850 | 0.978 |      |       |      |
| Flt Protected       | 0.950 |       |       |      | 0.950 |      |
| Satd. Flow (prot)   | 1770  | 1583  | 3397  | 0    | 1770  | 3539 |
| Flt Permitted       | 0.950 |       |       |      | 0.224 |      |
| Satd. Flow (perm)   | 1770  | 1562  | 3397  | 0    | 417   | 3539 |
| Right Turn on Red   |       | Yes   |       | Yes  |       |      |
| Satd. Flow (RTOR)   |       | 43    | 29    |      |       |      |
| Link Speed (mph)    |       | 25    | 35    |      |       | 35   |
| Link Distance (ft)  |       | 1013  | 719   |      |       | 844  |
| Travel Time (s)     |       | 27.6  | 14.0  |      |       | 16.4 |

Intersection Summary

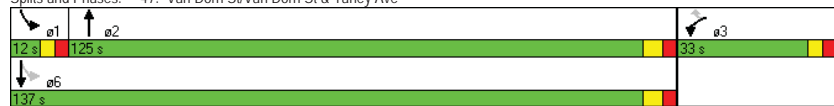
Area Type: Other

| Lane Group           | WBL   | WBR   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↘     | ↗     | ↑     | ↙     | ↘     |
| Volume (vph)         | 160   | 60    | 850   | 105   | 1890  |
| Turn Type            | NA    | Perm  | NA    | pm+pt | NA    |
| Protected Phases     | 3     |       | 2     | 1     | 6     |
| Permitted Phases     |       | 3     |       | 6     |       |
| Detector Phase       | 3     | 3     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 10.0  | 10.0  | 23.0  | 10.0  | 23.0  |
| Total Split (s)      | 33.0  | 33.0  | 125.0 | 12.0  | 137.0 |
| Total Split (%)      | 19.4% | 19.4% | 73.5% | 7.1%  | 80.6% |
| Yellow Time (s)      | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | -3.0  | -3.0  | -3.0  | -2.0  | -3.0  |
| Total Lost Time (s)  | 3.0   | 3.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             |       |       | Lag   | Lead  |       |
| Lead-Lag Optimize?   |       |       |       |       |       |
| Recall Mode          | None  | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  | 24.3  | 24.3  | 125.7 | 138.7 | 138.7 |
| Actuated g/C Ratio   | 0.14  | 0.14  | 0.74  | 0.82  | 0.82  |
| v/c Ratio            | 0.68  | 0.25  | 0.43  | 0.27  | 0.70  |
| Control Delay        | 82.3  | 27.9  | 9.2   | 0.4   | 2.2   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 1.1   |
| Total Delay          | 82.3  | 27.9  | 9.2   | 0.4   | 3.3   |
| LOS                  | F     | C     | A     | A     | A     |
| Approach Delay       | 67.4  |       | 9.2   |       | 3.1   |
| Approach LOS         | E     |       | A     |       | A     |

**Intersection Summary**

Cycle Length: 170  
 Actuated Cycle Length: 170  
 Offset: 6 (4%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.70  
 Intersection Signal Delay: 9.4  
 Intersection LOS: A  
 Intersection Capacity Utilization 67.8%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 47: Van Dorn St/Van Dorn St & Taney Ave



| Lane Group              | WBL   | WBR   | NBT   | SBL  | SBT   |
|-------------------------|-------|-------|-------|------|-------|
| Protected Phases        | 3     |       | 2     | 1    | 6     |
| Permitted Phases        |       | 3     |       | 6    |       |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0  | 4.0   |
| Minimum Split (s)       | 10.0  | 10.0  | 23.0  | 10.0 | 23.0  |
| Total Split (s)         | 33.0  | 33.0  | 125.0 | 12.0 | 137.0 |
| Total Split (%)         | 19.4% | 19.4% | 73.5% | 7.1% | 80.6% |
| Maximum Green (s)       | 27.0  | 27.0  | 118.0 | 6.0  | 130.0 |
| Yellow Time (s)         | 3.0   | 3.0   | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   |
| Lead/Lag                |       |       | Lag   | Lead |       |
| Lead-Lag Optimize?      |       |       |       |      |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None  | None  | C-Max | None | C-Max |
| Walk Time (s)           |       |       | 5.0   |      | 5.0   |
| Flash Dont Walk (s)     |       |       | 11.0  |      | 11.0  |
| Pedestrian Calls (#/hr) |       |       | 0     |      | 0     |
| 90th %ile Green (s)     | 27.0  | 27.0  | 118.0 | 6.0  | 130.0 |
| 90th %ile Term Code     | Max   | Max   | Coord | Max  | Coord |
| 70th %ile Green (s)     | 24.7  | 24.7  | 118.0 | 8.3  | 132.3 |
| 70th %ile Term Code     | Gap   | Gap   | Coord | Max  | Coord |
| 50th %ile Green (s)     | 21.7  | 21.7  | 121.7 | 7.6  | 135.3 |
| 50th %ile Term Code     | Gap   | Gap   | Coord | Gap  | Coord |
| 30th %ile Green (s)     | 18.7  | 18.7  | 125.4 | 6.9  | 138.3 |
| 30th %ile Term Code     | Gap   | Gap   | Coord | Gap  | Coord |
| 10th %ile Green (s)     | 14.5  | 14.5  | 130.3 | 6.2  | 142.5 |
| 10th %ile Term Code     | Gap   | Gap   | Coord | Gap  | Coord |

**Intersection Summary**

Cycle Length: 170  
 Actuated Cycle Length: 170  
 Offset: 6 (4%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
51: Beauregard St & Sanger Ave

PM PEAK  
10/22/2011

| Lane Group          | EBL   | EBT  | EBR   | WBL  | WBT   | WBR   | NBL   | NBT  | NBR   | SBL  | SBT   | SBR   |
|---------------------|-------|------|-------|------|-------|-------|-------|------|-------|------|-------|-------|
| Lane Configurations | ↔     | ↗    | ↘     | ↔    | ↗     | ↘     | ↔     | ↗    | ↘     | ↔    | ↗     | ↘     |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  |
| Lane Width (ft)     | 12    | 12   | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12   | 12    | 12    |
| Grade (%)           | 0%    |      | 0%    |      | 0%    |       | 0%    |      | 0%    |      | 0%    |       |
| Storage Length (ft) | 250   |      | 250   | 250  |       | 0     | 175   |      | 200   | 500  |       | 0     |
| Storage Lanes       | 1     |      | 1     | 1    |       | 1     | 1     |      | 0     | 1    |       | 0     |
| Taper Length (ft)   | 50    |      | 50    | 50   |       | 50    | 50    |      | 50    | 50   |       | 50    |
| 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     | 0.76  |      | 0.93  |      | 0.99  |       | 0.99  |      | 0.99  |      | 0.99  |       |
| Frt                 | 0.850 |      | 0.850 |      | 0.955 |       | 0.955 |      | 0.990 |      | 0.990 |       |
| Flt Protected       | 0.950 |      | 0.950 |      |       | 0.950 |       |      | 0.950 |      |       | 0.950 |
| Satd. Flow (prot)   | 1770  | 1863 | 1583  | 1770 | 1863  | 1583  | 1770  | 3358 | 0     | 1770 | 3483  | 0     |
| Flt Permitted       | 0.719 |      | 0.670 |      |       | 0.224 |       |      | 0.125 |      |       | 0.125 |
| Satd. Flow (perm)   | 1339  | 1863 | 1199  | 1248 | 1863  | 1468  | 417   | 3358 | 0     | 233  | 3483  | 0     |
| Right Turn on Red   | No    |      | No    |      | No    |       | No    |      | No    |      | No    |       |
| Satd. Flow (RTOR)   | 25    |      | 25    |      | 35    |       | 35    |      | 35    |      | 35    |       |
| Link Speed (mph)    | 941   |      | 1259  |      | 947   |       | 1932  |      | 1932  |      | 1932  |       |
| Travel Time (s)     | 25.7  |      | 34.3  |      | 18.4  |       | 37.6  |      | 37.6  |      | 37.6  |       |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
51: Beauregard St & Sanger Ave

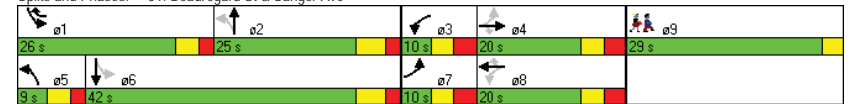
PM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   | ø9   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations  | ↔     | ↗     | ↘     | ↔     | ↗     | ↘     | ↔     | ↗     | ↘     | ↗     | ↘    |
| Volume (vph)         | 45    | 65    | 80    | 205   | 55    | 120   | 90    | 510   | 485   | 1085  |      |
| Turn Type            | pm+pt | NA    | Perm  | pm+pt | NA    | pm+ov | pm+pt | NA    | pm+pt | NA    |      |
| Protected Phases     | 7     | 4     |       | 3     | 8     | 1     | 5     | 2     | 1     | 6     | 9    |
| Permitted Phases     | 4     |       | 4     | 8     |       | 8     | 2     |       | 6     |       |      |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 1     | 5     | 2     | 1     | 6     |      |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |      |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0  |
| Minimum Split (s)    | 10.0  | 20.0  | 20.0  | 10.0  | 20.0  | 11.0  | 9.0   | 20.0  | 11.0  | 20.0  | 29.0 |
| Total Split (s)      | 10.0  | 20.0  | 20.0  | 10.0  | 20.0  | 26.0  | 9.0   | 25.0  | 26.0  | 42.0  | 29.0 |
| Total Split (%)      | 9.1%  | 18.2% | 18.2% | 9.1%  | 18.2% | 23.6% | 8.2%  | 22.7% | 23.6% | 38.2% | 26%  |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   | 3.0  |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.0  |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -5.0  | -5.0  | 0.0   | -5.0  |      |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 0.0   | 1.0   | 5.0   | 1.0   |      |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lead  | Lag   |      |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |      |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max | None |
| Act Effct Green (s)  | 15.8  | 11.8  | 11.8  | 17.0  | 13.8  | 57.7  | 46.5  | 33.3  | 77.2  | 69.0  |      |
| Actuated g/C Ratio   | 0.14  | 0.11  | 0.11  | 0.15  | 0.13  | 0.52  | 0.42  | 0.30  | 0.70  | 0.63  |      |
| v/c Ratio            | 0.23  | 0.35  | 0.67  | 1.04  | 0.25  | 0.16  | 0.30  | 0.77  | 0.68  | 0.57  |      |
| Control Delay        | 38.7  | 49.6  | 71.2  | 116.6 | 46.9  | 13.5  | 9.4   | 29.1  | 17.9  | 4.8   |      |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      |
| Total Delay          | 38.7  | 49.6  | 71.2  | 116.6 | 46.9  | 13.5  | 9.4   | 29.1  | 17.9  | 4.8   |      |
| LOS                  | D     | D     | E     | F     | D     | B     | A     | C     | B     | A     |      |
| Approach Delay       | 56.1  |       | 73.9  |       | 26.9  |       | 8.7   |       | 8.7   |       |      |
| Approach LOS         | E     |       | E     |       | C     |       | A     |       | A     |       |      |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 105 (95%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 130  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.04  
 Intersection Signal Delay: 24.7  
 Intersection Capacity Utilization 78.8%  
 Intersection LOS: C  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 51: Beauregard St & Sanger Ave



Updated 2035 Baseline with Recommended Improvements  
51: Beauregard St & Sanger Ave

PM PEAK  
10/22/2011

| Lane Group              | EBL  | EBT   | EBR   | WBL  | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   | ø9   |
|-------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|-------|------|
| Protected Phases        | 7    | 4     |       | 3    | 8     | 1     | 5     | 2     | 1     | 6     | 9    |
| Permitted Phases        | 4    |       | 4     | 8    |       | 8     | 2     |       | 6     |       |      |
| Minimum Initial (s)     | 4.0  | 4.0   | 4.0   | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0  |
| Minimum Split (s)       | 10.0 | 20.0  | 20.0  | 10.0 | 20.0  | 11.0  | 9.0   | 20.0  | 11.0  | 20.0  | 29.0 |
| Total Split (s)         | 10.0 | 20.0  | 20.0  | 10.0 | 20.0  | 26.0  | 9.0   | 25.0  | 26.0  | 42.0  | 29.0 |
| Total Split (%)         | 9.1% | 18.2% | 18.2% | 9.1% | 18.2% | 23.6% | 8.2%  | 22.7% | 23.6% | 38.2% | 26%  |
| Maximum Green (s)       | 4.0  | 14.0  | 14.0  | 4.0  | 14.0  | 21.0  | 4.0   | 19.0  | 21.0  | 36.0  | 26.0 |
| Yellow Time (s)         | 3.0  | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   | 3.0  |
| All-Red Time (s)        | 3.0  | 3.0   | 3.0   | 3.0  | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.0  |
| Lead/Lag                | Lead | Lag   | Lag   | Lead | Lag   | Lead  | Lead  | Lag   | Lead  | Lag   |      |
| Lead-Lag Optimize?      |      |       |       |      |       |       |       |       |       |       |      |
| Vehicle Extension (s)   | 3.0  | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   |      |
| Minimum Gap (s)         | 3.0  | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |      |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      |
| Recall Mode             | None | None  | None  | None | None  | None  | C-Max | None  | C-Max | None  |      |
| Walk Time (s)           |      |       |       |      |       |       |       |       |       |       | 8.0  |
| Flash Dont Walk (s)     |      |       |       |      |       |       |       |       |       |       | 18.0 |
| Pedestrian Calls (#/hr) |      |       |       |      |       |       |       |       |       |       | 0    |
| 90th %ile Green (s)     | 4.0  | 14.0  | 14.0  | 4.0  | 14.0  | 38.5  | 9.0   | 30.5  | 38.5  | 60.0  | 0.0  |
| 90th %ile Term Code     | Max  | Max   | Max   | Max  | Hold  | Gap   | Gap   | Coord | Gap   | Coord | Skip |
| 70th %ile Green (s)     | 4.0  | 14.0  | 14.0  | 4.0  | 14.0  | 37.3  | 7.8   | 31.7  | 37.3  | 61.2  | 0.0  |
| 70th %ile Term Code     | Max  | Max   | Max   | Max  | Hold  | Gap   | Gap   | Coord | Gap   | Coord | Skip |
| 50th %ile Green (s)     | 4.0  | 13.2  | 13.2  | 4.0  | 13.2  | 38.5  | 7.1   | 31.3  | 38.5  | 62.7  | 0.0  |
| 50th %ile Term Code     | Max  | Gap   | Gap   | Max  | Hold  | Gap   | Gap   | Coord | Gap   | Coord | Skip |
| 30th %ile Green (s)     | 4.0  | 10.7  | 10.7  | 4.0  | 10.7  | 43.5  | 6.5   | 28.8  | 43.5  | 65.8  | 0.0  |
| 30th %ile Term Code     | Max  | Gap   | Gap   | Max  | Hold  | Gap   | Gap   | Coord | Gap   | Coord | Skip |
| 10th %ile Green (s)     | 0.0  | 7.1   | 7.1   | 4.0  | 17.1  | 56.9  | 5.8   | 19.0  | 56.9  | 70.1  | 0.0  |
| 10th %ile Term Code     | Skip | Gap   | Gap   | Max  | Hold  | Max   | Gap   | Coord | Max   | Coord | Skip |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 105 (95%), Referenced to phase 2:NBL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
52: Beauregard St & Rayburn Ave

PM PEAK  
10/22/2011

| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT   | WBR   | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|---------------------|------|-------|-------|------|-------|-------|-------|-------|------|-------|-------|------|
| Lane Configurations |      | ↔     | ↔     |      | ↔     | ↔     | ↔     | ↔     | ↔    | ↔     | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           |      | 0%    |       |      | 0%    |       |       | 0%    |      |       | 0%    |      |
| Storage Length (ft) | 0    |       | 0     | 0    |       | 0     | 190   |       | 0    | 175   |       | 0    |
| Storage Lanes       | 0    |       | 1     | 0    |       | 1     | 1     |       | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50   |       |       | 50   |       |       | 50    |       |      | 50    |       |      |
| 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     |      |       |       |      | 0.98  | 0.97  |       | 1.00  |      |       | 1.00  |      |
| Frt                 |      |       | 0.850 |      |       | 0.850 |       | 0.995 |      |       | 0.984 |      |
| Flt Protected       |      | 0.955 |       |      | 0.959 |       | 0.950 |       |      | 0.950 |       |      |
| Satd. Flow (prot)   | 0    | 1779  | 1583  | 0    | 1786  | 1583  | 1770  | 3512  | 0    | 1770  | 3474  | 0    |
| Flt Permitted       |      | 0.678 |       |      | 0.429 |       | 0.057 |       |      | 0.366 |       |      |
| Satd. Flow (perm)   | 0    | 1263  | 1583  | 0    | 783   | 1529  | 106   | 3512  | 0    | 682   | 3474  | 0    |
| Right Turn on Red   |      |       | Yes   |      |       | Yes   |       |       | Yes  |       |       | Yes  |
| Satd. Flow (RTOR)   |      |       | 54    |      |       | 32    |       | 5     |      | 21    |       |      |
| Link Speed (mph)    |      | 25    |       |      | 25    |       |       | 35    |      | 35    |       |      |
| Link Distance (ft)  |      | 932   |       |      | 601   |       |       | 749   |      | 719   |       |      |
| Travel Time (s)     |      | 25.4  |       |      | 16.4  |       |       | 14.6  |      | 14.0  |       |      |


Intersection Summary

Area Type: Other



Updated 2035 Baseline with Recommended Improvements  
52: Beauregard St & Rayburn Ave

PM PEAK  
10/22/2011



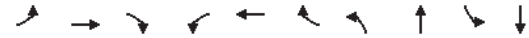
| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       | ↕     | ↕     |       | ↕     | ↕     | ↕     | ↕     | ↕     | ↕     |
| Volume (vph)         | 190   | 10    | 50    | 65    | 10    | 30    | 55    | 645   | 15    | 1640  |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | Perm  | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     |       | 4     |       |       | 8     |       | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 4     | 8     |       | 8     | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 8     | 8     | 8     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 9.0   | 22.0  | 9.0   | 22.0  |
| Total Split (s)      | 29.0  | 29.0  | 29.0  | 29.0  | 29.0  | 29.0  | 9.0   | 72.0  | 9.0   | 72.0  |
| Total Split (%)      | 26.4% | 26.4% | 26.4% | 26.4% | 26.4% | 26.4% | 8.2%  | 65.5% | 8.2%  | 65.5% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max |       |
| Act Effct Green (s)  | 21.5  | 21.5  |       | 19.9  | 19.9  | 76.0  | 73.4  | 73.9  | 69.4  |       |
| Actuated g/C Ratio   | 0.20  | 0.20  |       | 0.18  | 0.18  | 0.69  | 0.67  | 0.67  | 0.63  |       |
| v/c Ratio            | 0.87  | 0.15  |       | 0.57  | 0.11  | 0.41  | 0.31  | 0.03  | 0.90  |       |
| Control Delay        | 75.1  | 10.8  |       | 55.8  | 12.6  | 18.9  | 6.9   | 5.1   | 14.6  |       |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.9   |       |
| Total Delay          | 75.1  | 10.8  |       | 55.8  | 12.6  | 18.9  | 6.9   | 5.1   | 15.5  |       |
| LOS                  | E     | B     |       | E     | B     | B     | A     | A     | B     |       |
| Approach Delay       | 62.2  |       |       | 43.6  |       |       | 7.8   |       | 15.4  |       |
| Approach LOS         | E     |       |       | D     |       |       | A     |       | B     |       |

**Intersection Summary**  
 Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 1 (1%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.90  
 Intersection Signal Delay: 18.6  
 Intersection LOS: B  
 Intersection Capacity Utilization 83.6%  
 ICU Level of Service E  
 Analysis Period (min) 15



Updated 2035 Baseline with Recommended Improvements  
52: Beauregard St & Rayburn Ave

PM PEAK  
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| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | SBL  | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|
| Protected Phases        |       | 4     |       |       |       | 8     |      | 5     | 2    | 1     |
| Permitted Phases        | 4     |       | 4     | 8     |       | 8     |      | 2     | 6    |       |
| Minimum Initial (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 4.0  | 10.0  | 4.0  | 10.0  |
| Minimum Split (s)       | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 9.0  | 22.0  | 9.0  | 22.0  |
| Total Split (s)         | 29.0  | 29.0  | 29.0  | 29.0  | 29.0  | 29.0  | 9.0  | 72.0  | 9.0  | 72.0  |
| Total Split (%)         | 26.4% | 26.4% | 26.4% | 26.4% | 26.4% | 26.4% | 8.2% | 65.5% | 8.2% | 65.5% |
| Maximum Green (s)       | 23.5  | 23.5  | 23.5  | 23.5  | 23.5  | 23.5  | 4.0  | 66.0  | 4.0  | 66.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)        | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.0  | 2.0   | 2.0  | 2.0   |
| Lead/Lag                |       |       |       |       |       |       | Lead | Lag   | Lead | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |      |       |      |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 0.2   | 3.0  | 0.2   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 0.2   | 3.0  | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None | C-Max | None | C-Max |
| Walk Time (s)           | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0  | 4.0   | 4.0  | 4.0   |
| Flash Dont Walk (s)     | 18.0  | 18.0  | 18.0  | 18.0  | 18.0  | 18.0  |      | 12.0  |      | 12.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     | 0     |      | 0     |      | 0     |
| 90th %ile Green (s)     | 23.5  | 23.5  | 23.5  | 23.5  | 23.5  | 23.5  | 4.0  | 66.0  | 4.0  | 66.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Max  | Coord | Max  | Coord |
| 70th %ile Green (s)     | 23.5  | 23.5  | 23.5  | 23.5  | 23.5  | 23.5  | 4.0  | 66.0  | 4.0  | 66.0  |
| 70th %ile Term Code     | Max   | Max   | Max   | Hold  | Hold  | Hold  | Max  | Coord | Max  | Coord |
| 50th %ile Green (s)     | 23.5  | 23.5  | 23.5  | 23.5  | 23.5  | 23.5  | 4.0  | 75.0  | 0.0  | 66.0  |
| 50th %ile Term Code     | Max   | Max   | Max   | Hold  | Hold  | Hold  | Max  | Coord | Skip | Coord |
| 30th %ile Green (s)     | 21.2  | 21.2  | 21.2  | 21.2  | 21.2  | 21.2  | 6.1  | 77.3  | 0.0  | 66.2  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Hold  | Hold  | Hold  | Gap  | Coord | Skip | Coord |
| 10th %ile Green (s)     | 15.8  | 15.8  | 15.8  | 0.0   | 0.0   | 0.0   | 0.0  | 82.7  | 0.0  | 82.7  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Skip  | Skip  | Skip  | Skip | Coord | Skip | Coord |

**Intersection Summary**  
 Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 1 (1%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
53: Beauregard St & Reading Ave

PM PEAK  
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| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT   | WBR   | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|
| Lane Configurations |      | ↔     | ↔     |      | ↔     | ↔     | ↔     | ↔    | ↔     | ↔     | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           |      | 0%    |       |      | 0%    |       | 0%    |      |       | 0%    |       |      |
| Storage Length (ft) | 0    |       | 0     | 0    |       | 0     | 150   |      | 150   | 170   |       | 0    |
| Storage Lanes       | 0    |       | 1     | 0    |       | 1     |       |      | 1     | 1     |       | 0    |
| Taper Length (ft)   | 50   |       |       | 50   |       |       | 50    |      | 50    |       |       | 50   |
| Lane Util. Factor   | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 0.95 |
| Ped Bike Factor     |      |       | 0.98  |      |       | 0.98  |       |      | 0.95  |       | 1.00  |      |
| Frt                 |      |       | 0.850 |      |       | 0.850 |       |      | 0.850 |       | 0.992 |      |
| Flt Protected       |      | 0.954 |       |      | 0.971 |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (prot)   | 0    | 1777  | 1583  | 0    | 1809  | 1583  | 1770  | 3539 | 1583  | 1770  | 3497  | 0    |
| Flt Permitted       |      | 0.712 |       |      | 0.794 |       | 0.060 |      |       | 0.471 |       |      |
| Satd. Flow (perm)   | 0    | 1326  | 1546  | 0    | 1479  | 1550  | 112   | 3539 | 1506  | 877   | 3497  | 0    |
| Right Turn on Red   |      |       | Yes   |      | Yes   |       | Yes   |      | Yes   |       | Yes   |      |
| Satd. Flow (RTOR)   |      |       | 86    |      | 108   |       |       |      | 38    |       | 8     |      |
| Link Speed (mph)    |      | 25    |       |      | 25    |       | 35    |      |       |       | 35    |      |
| Link Distance (ft)  |      | 1147  |       |      | 584   |       | 1932  |      |       |       | 749   |      |
| Travel Time (s)     |      | 31.3  |       |      | 15.9  |       | 37.6  |      |       |       | 14.6  |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
53: Beauregard St & Reading Ave

PM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       | ↔     | ↔     |       | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 160   | 5     | 80    | 15    | 10    | 100   | 180   | 460   | 35    | 120   | 1550  |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    |
| Protected Phases     |       | 4     |       |       | 8     |       | 5     | 2     |       | 1     | 6     |
| Permitted Phases     | 4     |       | 4     | 8     |       | 8     | 2     |       | 2     | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 8     | 8     | 8     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 6.0   | 10.0  | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)    | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 11.0  | 24.0  | 24.0  | 11.0  | 24.0  |
| Total Split (s)      | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 14.0  | 68.0  | 68.0  | 11.0  | 65.0  |
| Total Split (%)      | 28.2% | 28.2% | 28.2% | 28.2% | 28.2% | 28.2% | 12.7% | 61.8% | 61.8% | 10.0% | 59.1% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 6.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       |       |       | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |
| Act Effct Green (s)  |       | 19.3  | 19.3  |       | 19.3  | 19.3  | 78.6  | 66.7  | 66.7  | 70.5  | 62.5  |
| Actuated g/C Ratio   |       | 0.18  | 0.18  |       | 0.18  | 0.18  | 0.71  | 0.61  | 0.61  | 0.64  | 0.57  |
| v/c Ratio            |       | 0.76  | 0.25  |       | 0.10  | 0.30  | 0.78  | 0.23  | 0.04  | 0.21  | 0.88  |
| Control Delay        |       | 63.3  | 9.5   |       | 36.5  | 9.0   | 64.5  | 2.3   | 0.1   | 3.4   | 12.0  |
| Queue Delay          |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.3   |
| Total Delay          |       | 63.3  | 9.5   |       | 36.5  | 9.0   | 64.5  | 2.3   | 0.1   | 3.4   | 12.3  |
| LOS                  |       | E     | A     |       | D     | A     | E     | A     | A     | A     | B     |
| Approach Delay       |       | 45.7  |       |       | 14.5  |       | 18.8  |       |       |       | 11.7  |
| Approach LOS         |       | D     |       |       | B     |       | B     |       |       |       | B     |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 15 (14%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.88  
 Intersection Signal Delay: 16.5  
 Intersection LOS: B  
 Intersection Capacity Utilization 86.9%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 53: Beauregard St & Reading Ave



Updated 2035 Baseline with Recommended Improvements  
53: Beauregard St & Reading Ave

PM PEAK  
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| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |  |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Protected Phases        | 4     |       | 8     |       | 8     |       | 5     |       | 2     |       | 1     |  |
| Permitted Phases        | 4     |       | 4     | 8     |       | 8     |       | 2     | 2     | 6     |       |  |
| Minimum Initial (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 6.0   | 10.0  | 10.0  | 6.0   | 10.0  |  |
| Minimum Split (s)       | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 11.0  | 24.0  | 24.0  | 11.0  | 24.0  |  |
| Total Split (s)         | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 31.0  | 14.0  | 68.0  | 68.0  | 11.0  | 65.0  |  |
| Total Split (%)         | 28.2% | 28.2% | 28.2% | 28.2% | 28.2% | 28.2% | 12.7% | 61.8% | 61.8% | 10.0% | 59.1% |  |
| Maximum Green (s)       | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 9.0   | 62.0  | 62.0  | 6.0   | 59.0  |  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |  |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |  |
| Lead/Lag                |       |       |       |       |       |       | Lead  | Lag   | Lag   | Lead  | Lag   |  |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |       |  |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |  |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |  |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |  |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |       | 7.0   | 7.0   |       | 7.0   |  |
| Flash Dont Walk (s)     | 18.0  | 18.0  | 18.0  | 18.0  | 18.0  | 18.0  |       | 8.0   | 8.0   |       | 8.0   |  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     | 0     |       | 0     | 0     |       | 0     |  |
| 90th %ile Green (s)     | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 25.0  | 9.0   | 62.0  | 62.0  | 6.0   | 59.0  |  |
| 90th %ile Term Code     | Max   | Max   | Max   | Hold  | Hold  | Hold  | Max   | Coord | Coord | Max   | Coord |  |
| 70th %ile Green (s)     | 23.0  | 23.0  | 23.0  | 23.0  | 23.0  | 23.0  | 11.0  | 62.0  | 62.0  | 8.0   | 59.0  |  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Hold  | Hold  | Hold  | Max   | Coord | Coord | Max   | Coord |  |
| 50th %ile Green (s)     | 19.9  | 19.9  | 19.9  | 19.9  | 19.9  | 19.9  | 14.1  | 65.2  | 65.2  | 7.9   | 59.0  |  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Hold  | Hold  | Hold  | Max   | Coord | Coord | Gap   | Coord |  |
| 30th %ile Green (s)     | 16.6  | 16.6  | 16.6  | 16.6  | 16.6  | 16.6  | 12.4  | 69.4  | 69.4  | 7.0   | 64.0  |  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Hold  | Hold  | Hold  | Gap   | Coord | Coord | Gap   | Coord |  |
| 10th %ile Green (s)     | 11.9  | 11.9  | 11.9  | 11.9  | 11.9  | 11.9  | 9.5   | 75.0  | 75.0  | 6.1   | 71.6  |  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Hold  | Hold  | Hold  | Gap   | Coord | Coord | Gap   | Coord |  |

Intersection Summary

Cycle Length: 110  
Actuated Cycle Length: 110  
Offset: 15 (14%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
54: Beauregard St & N Morgan St

PM PEAK  
10/22/2011

| Lane Group          | EBL   | EBT  | EBR   | WBL  | WBT   | WBR  | NBL   | NBT  | NBR   | SBL  | SBT   | SBR  |
|---------------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|
| Lane Configurations | ↔     |      | ↔     |      | ↔     |      | ↔     |      | ↔     |      | ↔     |      |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12   | 12    | 12   | 12    | 12   | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |      | 0%    |      | 0%    |      | 0%    |      | 0%    |      | 0%    |      |
| Storage Length (ft) | 0     |      | 175   | 0    |       | 0    | 115   |      | 0     | 115  |       | 0    |
| Storage Lanes       | 1     |      | 1     | 0    |       | 0    | 1     |      | 0     | 1    |       | 0    |
| Taper Length (ft)   | 50    |      |       | 50   |       |      | 50    |      |       | 50   |       |      |
| 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     | 0.96  |      | 0.99  |      | 1.00  |      | 0.99  |      | 0.99  |      | 0.99  |      |
| Frt                 | 0.850 |      | 0.932 |      | 0.995 |      | 0.975 |      | 0.950 |      | 0.975 |      |
| Flt Protected       | 0.950 |      | 0.976 |      | 0.950 |      | 0.950 |      | 0.950 |      | 0.950 |      |
| Satd. Flow (prot)   | 1770  | 1528 | 0     | 0    | 1679  | 0    | 1770  | 3514 | 0     | 1770 | 3423  | 0    |
| Flt Permitted       | 0.746 |      | 0.836 |      | 0.151 |      | 0.340 |      | 0.340 |      | 0.340 |      |
| Satd. Flow (perm)   | 1390  | 1528 | 0     | 0    | 1438  | 0    | 281   | 3514 | 0     | 633  | 3423  | 0    |
| Right Turn on Red   | Yes   |      | Yes   |      | Yes   |      | Yes   |      | Yes   |      | Yes   |      |
| Satd. Flow (RTOR)   | 140   |      | 38    |      | 6     |      | 37    |      | 37    |      | 37    |      |
| Link Speed (mph)    | 25    |      | 25    |      | 35    |      | 35    |      | 35    |      | 35    |      |
| Link Distance (ft)  | 775   |      | 737   |      | 1062  |      | 947   |      | 947   |      | 947   |      |
| Travel Time (s)     | 21.1  |      | 20.1  |      | 20.7  |      | 18.4  |      | 18.4  |      | 18.4  |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
54: Beauregard St & N Morgan St

PM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 90    | 0     | 35    | 0     | 10    | 695   | 85    | 1075  |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     |       | 4     |       | 8     | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 8     | 8     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 8.0   | 8.0   | 8.0   | 8.0   | 4.0   | 15.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 27.0  | 27.0  | 27.0  | 27.0  | 9.0   | 21.0  | 9.0   | 21.0  |
| Total Split (s)      | 29.0  | 29.0  | 29.0  | 29.0  | 9.0   | 71.0  | 10.0  | 72.0  |
| Total Split (%)      | 26.4% | 26.4% | 26.4% | 26.4% | 8.2%  | 64.5% | 9.1%  | 65.5% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | Max   | C-Max | None  | C-Max |
| Act Effct Green (s)  | 13.1  | 13.1  |       | 13.1  | 81.1  | 76.9  | 81.8  | 75.9  |
| Actuated g/C Ratio   | 0.12  | 0.12  |       | 0.12  | 0.74  | 0.70  | 0.74  | 0.69  |
| v/c Ratio            | 0.59  | 0.04  |       | 0.37  | 0.04  | 0.31  | 0.17  | 0.58  |
| Control Delay        | 59.3  | 0.2   |       | 29.1  | 4.4   | 8.1   | 1.8   | 4.4   |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 59.3  | 0.2   |       | 29.1  | 4.4   | 8.1   | 1.8   | 4.4   |
| LOS                  | E     | A     |       | C     | A     | A     | A     | A     |
| Approach Delay       |       | 53.3  |       | 29.1  |       | 8.0   |       | 4.2   |
| Approach LOS         |       | D     |       | C     |       | A     |       | A     |

| Intersection Summary               |  |
|------------------------------------|--|
| Cycle Length:                      | 110  |
| Actuated Cycle Length:             | 110  |
| Offset:                            | 73 (66%), Referenced to phase 2:NBT and 6:SBTL, Start of Green |
| Natural Cycle:                     | 70   |
| Control Type:                      | Actuated-Coordinated   |
| Maximum v/c Ratio:                 | 0.59   |
| Intersection Signal Delay:         | 8.4  |
| Intersection LOS:                  | A  |
| Intersection Capacity Utilization: | 66.3%  |
| ICU Level of Service:              | C  |
| Analysis Period (min):             | 15   |

Splits and Phases: 54: Beauregard St & N Morgan St



Updated 2035 Baseline with Recommended Improvements  
54: Beauregard St & N Morgan St

PM PEAK  
10/22/2011

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL  | NBT   | SBL  | SBT   |
|-------------------------|-------|-------|-------|-------|------|-------|------|-------|
| Protected Phases        |       | 4     |       | 8     | 5    | 2     | 1    | 6     |
| Permitted Phases        | 4     |       | 8     |       | 2    |       | 6    |       |
| Minimum Initial (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 4.0  | 15.0  | 4.0  | 10.0  |
| Minimum Split (s)       | 27.0  | 27.0  | 27.0  | 27.0  | 9.0  | 21.0  | 9.0  | 21.0  |
| Total Split (s)         | 29.0  | 29.0  | 29.0  | 29.0  | 9.0  | 71.0  | 10.0 | 72.0  |
| Total Split (%)         | 26.4% | 26.4% | 26.4% | 26.4% | 8.2% | 64.5% | 9.1% | 65.5% |
| Maximum Green (s)       | 23.0  | 23.0  | 23.0  | 23.0  | 4.0  | 65.0  | 5.0  | 66.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 2.0  | 2.0   | 2.0  | 2.0   |
| Lead/Lag                |       |       |       |       | Lead | Lag   | Lead | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |      |       |      |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0  | 4.0   | 2.0  | 4.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 0.2  | 0.2   | 0.2  | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None  | None  | None  | None  | Max  | C-Max | None | C-Max |
| Walk Time (s)           | 4.0   | 4.0   | 4.0   | 4.0   |      | 7.0   |      | 7.0   |
| Flash Dont Walk (s)     | 17.0  | 17.0  | 17.0  | 17.0  |      | 8.0   |      | 8.0   |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     |      | 0     |      | 0     |
| 90th %ile Green (s)     | 18.6  | 18.6  | 18.6  | 18.6  | 4.0  | 69.4  | 5.0  | 70.4  |
| 90th %ile Term Code     | Gap   | Gap   | Hold  | Hold  | MaxR | Coord | Max  | Coord |
| 70th %ile Green (s)     | 15.3  | 15.3  | 15.3  | 15.3  | 4.0  | 72.7  | 5.0  | 73.7  |
| 70th %ile Term Code     | Gap   | Gap   | Hold  | Hold  | MaxR | Coord | Max  | Coord |
| 50th %ile Green (s)     | 13.0  | 13.0  | 13.0  | 13.0  | 4.0  | 75.0  | 5.0  | 76.0  |
| 50th %ile Term Code     | Gap   | Gap   | Hold  | Hold  | MaxR | Coord | Max  | Coord |
| 30th %ile Green (s)     | 10.6  | 10.6  | 10.6  | 10.6  | 4.0  | 77.4  | 5.0  | 78.4  |
| 30th %ile Term Code     | Gap   | Gap   | Hold  | Hold  | MaxR | Coord | Max  | Coord |
| 10th %ile Green (s)     | 8.0   | 8.0   | 0.0   | 0.0   | 4.0  | 90.0  | 0.0  | 81.0  |
| 10th %ile Term Code     | Min   | Min   | Skip  | Skip  | MaxR | Coord | Skip | Coord |

| Intersection Summary   |  |
|------------------------|--|
| Cycle Length:          | 110  |
| Actuated Cycle Length: | 110  |
| Offset:                | 73 (66%), Referenced to phase 2:NBT and 6:SBTL, Start of Green |
| Control Type:          | Actuated-Coordinated   |

Updated 2035 Baseline with Recommended Improvements  
55: Beauregard St & N Armistead St

PM PEAK  
10/22/2011

| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|---------------------|------|-------|-------|------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations |      | ↔     | ↔     |      | ↔     | ↔    | ↔     | ↔     |      | ↔     | ↔     |      |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           |      | 0%    |       |      | 0%    |      |       | 0%    |      |       | 0%    |      |
| Storage Length (ft) | 0    |       | 50    | 0    |       | 50   | 90    |       | 0    | 80    |       | 0    |
| Storage Lanes       | 0    |       | 1     | 0    |       | 1    | 1     |       | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50   |       |       | 50   |       |      | 50    |       |      | 50    |       |      |
| 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     |      |       |       |      |       |      | 0.98  | 1.00  |      |       | 1.00  |      |
| Frt                 |      |       | 0.850 |      |       |      | 0.850 | 0.993 |      |       | 0.995 |      |
| Flt Protected       |      | 0.950 |       |      | 0.950 |      | 0.950 |       |      | 0.950 |       |      |
| Satd. Flow (prot)   | 0    | 1770  | 1583  | 0    | 1770  | 1583 | 1770  | 3508  | 0    | 1770  | 3519  | 0    |
| Flt Permitted       |      | 0.719 |       |      | 0.750 |      | 0.287 |       |      | 0.359 |       |      |
| Satd. Flow (perm)   | 0    | 1339  | 1583  | 0    | 1397  | 1556 | 535   | 3508  | 0    | 669   | 3519  | 0    |
| Right Turn on Red   |      |       | Yes   |      |       | Yes  |       |       | Yes  |       |       | Yes  |
| Satd. Flow (RTOR)   |      |       | 32    |      |       | 140  |       | 5     |      |       | 4     |      |
| Link Speed (mph)    |      | 25    |       |      | 25    |      |       | 35    |      |       | 35    |      |
| Link Distance (ft)  |      | 620   |       |      | 778   |      |       | 935   |      |       | 1062  |      |
| Travel Time (s)     |      | 16.9  |       |      | 21.2  |      |       | 18.2  |      |       | 20.7  |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
55: Beauregard St & N Armistead St

PM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR    | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|
| Lane Configurations  |       | ↔     | ↔     |       | ↔     | ↔      | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 10    | 0     | 30    | 55    | 0     | 130    | 10    | 590   | 190   | 900   |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | custom | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     |       | 4     |       |       | 8     |        | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 4     | 8     |       | 4      | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 8     | 8     | 4      | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |        |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0    | 5.0   | 12.0  | 5.0   | 12.0  |
| Minimum Split (s)    | 36.5  | 36.5  | 36.5  | 36.5  | 36.5  | 36.5   | 10.0  | 22.0  | 10.0  | 22.0  |
| Total Split (s)      | 40.0  | 40.0  | 40.0  | 40.0  | 40.0  | 40.0   | 10.0  | 46.0  | 24.0  | 60.0  |
| Total Split (%)      | 36.4% | 36.4% | 36.4% | 36.4% | 36.4% | 36.4%  | 9.1%  | 41.8% | 21.8% | 54.5% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5    | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0    | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 6.5    | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       |       |        | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |        |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None   | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  |       | 10.3  | 10.3  |       | 10.3  | 10.3   | 79.8  | 73.8  | 88.2  | 85.2  |
| Actuated g/C Ratio   |       | 0.09  | 0.09  |       | 0.09  | 0.09   | 0.73  | 0.67  | 0.80  | 0.77  |
| v/c Ratio            |       | 0.09  | 0.18  |       | 0.45  | 0.51   | 0.02  | 0.28  | 0.33  | 0.37  |
| Control Delay        |       | 45.2  | 17.0  |       | 57.3  | 14.6   | 2.5   | 6.0   | 2.8   | 2.6   |
| Queue Delay          |       | 0.0   | 0.0   |       | 0.0   | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          |       | 45.2  | 17.0  |       | 57.3  | 14.6   | 2.5   | 6.0   | 2.8   | 2.6   |
| LOS                  |       | D     | B     |       | E     | B      | A     | A     | A     | A     |
| Approach Delay       |       | 24.2  |       |       | 27.3  |        |       | 5.9   |       | 2.7   |
| Approach LOS         |       | C     |       |       | C     |        |       | A     |       | A     |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 103 (94%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.51  
 Intersection Signal Delay: 6.4  
 Intersection LOS: A  
 Intersection Capacity Utilization 56.7%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 55: Beauregard St & N Armistead St



Updated 2035 Baseline with Recommended Improvements  
55: Beauregard St & N Armistead St

PM PEAK  
10/22/2011

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|
| Protected Phases        |       | 4     |       |       | 8     |       | 5    | 2     | 1     | 6     |
| Permitted Phases        | 4     |       | 4     | 8     |       | 4     | 2    |       | 6     |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 5.0  | 12.0  | 5.0   | 12.0  |
| Minimum Split (s)       | 36.5  | 36.5  | 36.5  | 36.5  | 36.5  | 36.5  | 10.0 | 22.0  | 10.0  | 22.0  |
| Total Split (s)         | 40.0  | 40.0  | 40.0  | 40.0  | 40.0  | 40.0  | 10.0 | 46.0  | 24.0  | 60.0  |
| Total Split (%)         | 36.4% | 36.4% | 36.4% | 36.4% | 36.4% | 36.4% | 9.1% | 41.8% | 21.8% | 54.5% |
| Maximum Green (s)       | 33.5  | 33.5  | 33.5  | 33.5  | 33.5  | 33.5  | 5.0  | 40.0  | 19.0  | 54.0  |
| Yellow Time (s)         | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.0  | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0  | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       |       |       | Lead | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |      |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2  | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None | C-Max | None  | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |      | 4.0   |       | 4.0   |
| Flash Dont Walk (s)     | 23.0  | 23.0  | 23.0  | 23.0  | 23.0  | 23.0  |      | 12.0  |       | 12.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     | 0     |      | 0     |       | 0     |
| 90th %ile Green (s)     | 14.4  | 14.4  | 14.4  | 14.4  | 14.4  | 14.4  | 5.0  | 67.2  | 10.9  | 73.1  |
| 90th %ile Term Code     | Hold  | Hold  | Hold  | Gap   | Gap   | Hold  | Max  | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 11.8  | 11.8  | 11.8  | 11.8  | 11.8  | 11.8  | 0.0  | 71.5  | 9.2   | 85.7  |
| 70th %ile Term Code     | Hold  | Hold  | Hold  | Gap   | Gap   | Hold  | Skip | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 0.0  | 74.2  | 8.3   | 87.5  |
| 50th %ile Term Code     | Hold  | Hold  | Hold  | Gap   | Gap   | Hold  | Skip | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 8.2   | 8.2   | 8.2   | 8.2   | 8.2   | 8.2   | 0.0  | 76.9  | 7.4   | 89.3  |
| 30th %ile Term Code     | Hold  | Hold  | Hold  | Gap   | Gap   | Hold  | Skip | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 7.0   | 7.0   | 7.0   | 0.0   | 0.0   | 7.0   | 0.0  | 79.0  | 6.5   | 90.5  |
| 10th %ile Term Code     | Min   | Min   | Min   | Skip  | Skip  | Min   | Skip | Coord | Gap   | Coord |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 103 (94%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
56: Beauregard St & Quantrell Ave

PM PEAK  
10/22/2011

| Lane Group          | WBL   | WBR   | NBT  | NBR   | SBL   | SBT  |
|---------------------|-------|-------|------|-------|-------|------|
| Lane Configurations |       |       |      |       |       |      |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           | 0%    |       | 0%   |       |       | 0%   |
| Storage Length (ft) | 0     | 50    |      | 85    | 100   |      |
| Storage Lanes       | 1     | 1     |      | 1     | 1     |      |
| Taper Length (ft)   | 50    |       |      |       | 50    |      |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95 | 1.00  | 1.00  | 0.95 |
| Ped Bike Factor     | 0.98  |       |      |       |       |      |
| Frt                 |       | 0.850 |      | 0.850 |       |      |
| Flt Protected       | 0.950 |       |      |       | 0.950 |      |
| Satd. Flow (prot)   | 1770  | 1583  | 3539 | 1583  | 1770  | 3539 |
| Flt Permitted       | 0.950 |       |      |       | 0.411 |      |
| Satd. Flow (perm)   | 1731  | 1583  | 3539 | 1583  | 766   | 3539 |
| Right Turn on Red   |       | Yes   |      | Yes   |       |      |
| Satd. Flow (RTOR)   |       | 43    |      | 91    |       |      |
| Link Speed (mph)    | 30    |       | 35   |       | 35    |      |
| Link Distance (ft)  | 751   |       | 931  |       | 935   |      |
| Travel Time (s)     | 17.1  |       | 18.1 |       | 18.2  |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
56: Beauregard St & Quantrell Ave

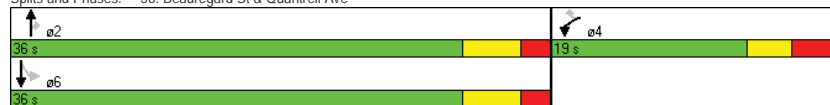
PM PEAK  
10/22/2011

| Lane Group           | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↑↑    | ↔     | ↔     | ↑↑    |
| Volume (vph)         | 110   | 40    | 590   | 85    | 85    | 900   |
| Turn Type            | NA    | Perm  | NA    | Perm  | Perm  | NA    |
| Protected Phases     | 4     |       | 2     |       |       | 6     |
| Permitted Phases     |       | 4     |       | 2     | 6     |       |
| Detector Phase       | 4     | 4     | 2     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |
| Minimum Initial (s)  | 6.0   | 6.0   | 10.0  | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)    | 12.0  | 12.0  | 16.0  | 16.0  | 16.0  | 16.0  |
| Total Split (s)      | 19.0  | 19.0  | 36.0  | 36.0  | 36.0  | 36.0  |
| Total Split (%)      | 34.5% | 34.5% | 65.5% | 65.5% | 65.5% | 65.5% |
| Yellow Time (s)      | 3.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |
| Recall Mode          | None  | None  | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s)  | 9.0   | 9.0   | 37.6  | 37.6  | 37.6  | 37.6  |
| Actuated g/C Ratio   | 0.16  | 0.16  | 0.68  | 0.68  | 0.68  | 0.68  |
| v/c Ratio            | 0.41  | 0.15  | 0.26  | 0.08  | 0.17  | 0.40  |
| Control Delay        | 24.1  | 8.1   | 5.3   | 1.8   | 6.3   | 6.0   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 24.1  | 8.1   | 5.3   | 1.8   | 6.3   | 6.0   |
| LOS                  | C     | A     | A     | A     | A     | A     |
| Approach Delay       | 19.8  |       | 4.8   |       |       | 6.0   |
| Approach LOS         | B     |       | A     |       |       | A     |

**Intersection Summary**

Cycle Length: 55  
 Actuated Cycle Length: 55  
 Offset: 2 (4%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.41  
 Intersection Signal Delay: 6.7  
 Intersection LOS: A  
 Intersection Capacity Utilization 45.7%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 56: Beauregard St & Quantrell Ave



Updated 2035 Baseline with Recommended Improvements  
56: Beauregard St & Quantrell Ave

PM PEAK  
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| Lane Group              | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 4     |       | 2     |       |       | 6     |
| Permitted Phases        |       | 4     |       | 2     | 6     |       |
| Minimum Initial (s)     | 6.0   | 6.0   | 10.0  | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 12.0  | 12.0  | 16.0  | 16.0  | 16.0  | 16.0  |
| Total Split (s)         | 19.0  | 19.0  | 36.0  | 36.0  | 36.0  | 36.0  |
| Total Split (%)         | 34.5% | 34.5% | 65.5% | 65.5% | 65.5% | 65.5% |
| Maximum Green (s)       | 13.0  | 13.0  | 30.0  | 30.0  | 30.0  | 30.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s)           |       |       |       |       |       |       |
| Flash Dont Walk (s)     |       |       |       |       |       |       |
| Pedestrian Calls (#/hr) |       |       |       |       |       |       |
| 90th %ile Green (s)     | 12.3  | 12.3  | 30.7  | 30.7  | 30.7  | 30.7  |
| 90th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 70th %ile Green (s)     | 10.3  | 10.3  | 32.7  | 32.7  | 32.7  | 32.7  |
| 70th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 50th %ile Green (s)     | 8.9   | 8.9   | 34.1  | 34.1  | 34.1  | 34.1  |
| 50th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 30th %ile Green (s)     | 7.6   | 7.6   | 35.4  | 35.4  | 35.4  | 35.4  |
| 30th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   | 49.0  | 49.0  | 49.0  | 49.0  |
| 10th %ile Term Code     | Skip  | Skip  | Coord | Coord | Coord | Coord |

**Intersection Summary**

Cycle Length: 55  
 Actuated Cycle Length: 55  
 Offset: 2 (4%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
58: Lincoln Rd/Gloucester Rd & Beauregard St

PM PEAK  
10/22/2011

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT  | WBR  | NBL  | NBT  | NBR   | SBL  | SBT   | SBR  |
|---------------------|-------|------|------|-------|------|------|------|------|-------|------|-------|------|
| Lane Configurations | ↔     | ↕    | ↔    | ↔     | ↕    | ↔    | ↔    | ↕    | ↔     | ↔    | ↕     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12   | 12   | 12   | 12   | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |      | 0%   |       | 0%   |      | 0%   |      | 0%    |      | 0%    |      |
| Storage Length (ft) | 175   |      | 0    | 175   |      | 0    | 0    |      | 0     | 0    |       | 0    |
| Storage Lanes       | 1     |      | 0    | 1     |      | 0    | 0    |      | 1     | 0    |       | 0    |
| Taper Length (ft)   | 50    |      |      | 50    |      |      | 50   |      | 50    |      |       | 50   |
| 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 |
| Ped Bike Factor     | 0.99  |      |      |       |      |      |      |      | 0.98  |      |       |      |
| Frt                 | 0.974 |      |      |       |      |      |      |      | 0.850 |      | 0.865 |      |
| Flt Protected       | 0.950 |      |      | 0.950 |      |      |      |      | 0.950 |      |       |      |
| Satd. Flow (prot)   | 1770  | 3425 | 0    | 1770  | 3539 | 0    | 0    | 1770 | 1583  | 0    | 1611  | 0    |
| Flt Permitted       | 0.259 |      |      | 0.293 |      |      |      |      | 0.754 |      |       |      |
| Satd. Flow (perm)   | 482   | 3425 | 0    | 546   | 3539 | 0    | 0    | 1405 | 1558  | 0    | 1611  | 0    |
| Right Turn on Red   |       |      | Yes  |       |      | Yes  |      |      | Yes   |      |       | Yes  |
| Satd. Flow (RTOR)   | 21    |      |      |       |      |      |      |      | 97    |      | 168   |      |
| Link Speed (mph)    | 35    |      |      |       | 35   |      |      |      | 35    |      | 30    |      |
| Link Distance (ft)  | 545   |      |      |       | 931  |      |      |      | 614   |      | 831   |      |
| Travel Time (s)     | 10.6  |      |      |       | 18.1 |      |      |      | 12.0  |      | 18.9  |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
58: Lincoln Rd/Gloucester Rd & Beauregard St

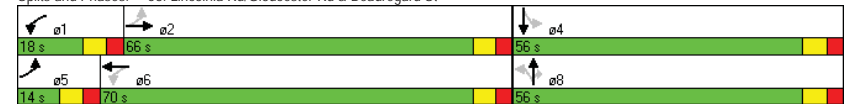
PM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↕     | ↕     |
| Volume (vph)         | 15    | 585   | 100   | 910   | 240   | 0     | 90    | 0     |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     |       | 8     |       | 4     |
| Permitted Phases     | 2     |       | 6     |       | 8     |       | 8     |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 8     | 8     | 8     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 13.0  | 33.0  | 13.0  | 17.0  | 37.0  | 37.0  | 37.0  | 36.0  |
| Total Split (s)      | 14.0  | 66.0  | 18.0  | 70.0  | 56.0  | 56.0  | 56.0  | 56.0  |
| Total Split (%)      | 10.0% | 47.1% | 12.9% | 50.0% | 40.0% | 40.0% | 40.0% | 40.0% |
| Yellow Time (s)      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | None  | None  | None  |
| Act Effct Green (s)  | 84.7  | 78.7  | 93.3  | 89.0  |       | 31.6  | 31.6  | 31.6  |
| Actuated g/C Ratio   | 0.60  | 0.56  | 0.67  | 0.64  |       | 0.23  | 0.23  | 0.23  |
| v/c Ratio            | 0.05  | 0.39  | 0.25  | 0.43  |       | 0.81  | 0.23  | 0.01  |
| Control Delay        | 7.1   | 13.2  | 10.7  | 15.8  |       | 70.4  | 8.0   | 0.0   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Total Delay          | 7.1   | 13.2  | 10.7  | 15.8  |       | 70.4  | 8.0   | 0.0   |
| LOS                  | A     | B     | B     | B     |       | E     | A     | A     |
| Approach Delay       | 13.0  |       | 15.3  |       | 53.4  |       | 0.0   |       |
| Approach LOS         | B     |       | B     |       | D     |       | A     |       |

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 65 (46%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 85  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.81  
 Intersection Signal Delay: 20.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 66.4%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 58: Lincoln Rd/Gloucester Rd & Beauregard St





Updated 2035 Baseline with Recommended Improvements  
58: Lincoln Rd/Gloucester Rd & Beauregard St

PM PEAK  
10/22/2011

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 5     | 2     | 1     | 6     |       | 8     |       | 4     |
| Permitted Phases        | 2     |       | 6     |       | 8     |       | 8     |       |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 13.0  | 33.0  | 13.0  | 17.0  | 37.0  | 37.0  | 37.0  | 36.0  |
| Total Split (s)         | 14.0  | 66.0  | 18.0  | 70.0  | 56.0  | 56.0  | 56.0  | 56.0  |
| Total Split (%)         | 10.0% | 47.1% | 12.9% | 50.0% | 40.0% | 40.0% | 40.0% | 40.0% |
| Maximum Green (s)       | 7.0   | 59.0  | 11.0  | 63.0  | 49.0  | 49.0  | 49.0  | 49.0  |
| Yellow Time (s)         | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | C-Min | None  | C-Min | None  | None  | None  | None  |
| Walk Time (s)           |       | 7.0   |       | 7.0   |       | 7.0   |       | 7.0   |
| Flash Dont Walk (s)     |       | 19.0  |       | 23.0  |       | 23.0  |       | 22.0  |
| Pedestrian Calls (#/hr) |       | 0     |       | 0     |       | 0     |       | 0     |
| 90th %ile Green (s)     | 6.8   | 64.9  | 11.7  | 69.8  | 42.4  | 42.4  | 42.4  | 42.4  |
| 90th %ile Term Code     | Gap   | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Hold  |
| 70th %ile Green (s)     | 6.2   | 73.5  | 9.6   | 76.9  | 35.9  | 35.9  | 35.9  | 35.9  |
| 70th %ile Term Code     | Gap   | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Hold  |
| 50th %ile Green (s)     | 0.0   | 79.1  | 8.4   | 94.5  | 31.5  | 31.5  | 31.5  | 31.5  |
| 50th %ile Term Code     | Skip  | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Hold  |
| 30th %ile Green (s)     | 0.0   | 84.4  | 7.4   | 98.8  | 27.2  | 27.2  | 27.2  | 27.2  |
| 30th %ile Term Code     | Skip  | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Hold  |
| 10th %ile Green (s)     | 0.0   | 91.8  | 6.3   | 105.1 | 20.9  | 20.9  | 20.9  | 20.9  |
| 10th %ile Term Code     | Skip  | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Hold  |

Intersection Summary

Cycle Length: 140  
Actuated Cycle Length: 140  
Offset: 65 (46%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
59: Beauregard St & N Chambliss St/Plaza at Landmark

PM PEAK  
10/22/2011

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|------|-------|-------|-------|------|-------|------|-------|-------|-------|------|
| Lane Configurations |       |      |       |       |       |      |       |      |       |       |       |      |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           |       | 0%   |       |       | 0%    |      |       | 0%   |       |       | 0%    |      |
| Storage Length (ft) | 0     |      | 75    | 0     |       | 0    | 150   |      | 140   | 170   |       | 0    |
| Storage Lanes       | 1     |      | 1     | 1     |       | 0    | 1     |      | 1     | 1     |       | 0    |
| Taper Length (ft)   | 50    |      |       | 50    |       |      | 50    |      |       | 50    |       |      |
| Lane Util. Factor   | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 0.95 |
| Ped Bike Factor     |       |      |       |       | 0.99  |      |       |      | 0.98  |       |       |      |
| Frt                 |       |      | 0.850 |       | 0.915 |      |       |      | 0.850 |       | 0.995 |      |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (prot)   | 1770  | 1863 | 1583  | 1770  | 1691  | 0    | 1770  | 3539 | 1583  | 1770  | 3522  | 0    |
| Flt Permitted       | 0.661 |      |       | 0.476 |       |      | 0.191 |      |       | 0.452 |       |      |
| Satd. Flow (perm)   | 1231  | 1863 | 1583  | 887   | 1691  | 0    | 356   | 3539 | 1546  | 842   | 3522  | 0    |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |       |      | Yes   |       |       | Yes  |
| Satd. Flow (RTOR)   |       |      | 499   |       | 45    |      |       |      | 188   |       | 2     |      |
| Link Speed (mph)    |       | 30   |       |       | 25    |      |       | 25   |       |       | 35    |      |
| Link Distance (ft)  |       | 622  |       |       | 252   |      |       | 846  |       |       | 464   |      |
| Travel Time (s)     |       | 14.1 |       |       | 6.9   |      |       | 23.1 |       |       | 9.0   |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
 59: Beauregard St & N Chambliss St/Plaza at Landmark

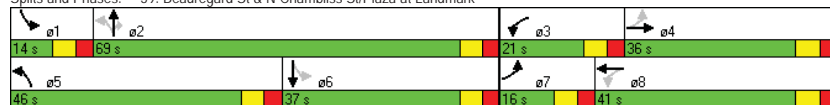
PM PEAK  
 10/22/2011

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |
| Volume (vph)         | 140   | 85    | 535   | 290   | 60    | 430   | 500   | 175   | 95    | 655   |
| Turn Type            | pm+pt | NA    | Free  | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     | 5     | 2     |       | 1     | 6     |
| Permitted Phases     | 4     |       | Free  | 8     |       |       | 2     | 2     | 6     |       |
| Detector Phase       | 7     | 4     |       | 3     | 8     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   |       | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 1.0   | 4.0   |
| Minimum Split (s)    | 11.0  | 36.0  |       | 11.0  | 36.0  | 12.0  | 22.0  | 22.0  | 12.0  | 22.0  |
| Total Split (s)      | 16.0  | 36.0  | 0.0   | 21.0  | 41.0  | 46.0  | 69.0  | 69.0  | 14.0  | 37.0  |
| Total Split (%)      | 11.4% | 25.7% | 0.0%  | 15.0% | 29.3% | 32.9% | 49.3% | 49.3% | 10.0% | 26.4% |
| Yellow Time (s)      | 4.0   | 4.0   |       | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   |       | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -5.0  |       |
| Total Lost Time (s)  | 7.0   | 7.0   | 4.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 2.0   |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  |       | None  | None  | C-Min | C-Min | None  | C-Min |       |
| Act Effct Green (s)  | 21.9  | 12.2  | 140.0 | 33.0  | 17.9  | 91.4  | 76.9  | 76.9  | 57.3  | 54.8  |
| Actuated g/C Ratio   | 0.16  | 0.09  | 1.00  | 0.24  | 0.13  | 0.65  | 0.55  | 0.55  | 0.41  | 0.39  |
| v/c Ratio            | 0.66  | 0.56  | 0.36  | 1.02  | 0.59  | 0.79  | 0.28  | 0.20  | 0.26  | 0.53  |
| Control Delay        | 60.3  | 73.9  | 0.6   | 105.4 | 49.7  | 24.1  | 11.4  | 1.4   | 13.7  | 32.1  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 60.3  | 73.9  | 0.6   | 105.4 | 49.7  | 24.1  | 11.4  | 1.4   | 13.7  | 32.1  |
| LOS                  | E     | E     | A     | F     | D     | C     | B     | A     | B     | C     |
| Approach Delay       | 19.8  |       |       | 87.2  |       |       | 14.7  |       | 29.8  |       |
| Approach LOS         | B     |       |       | F     |       |       | B     |       | C     |       |

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 72 (51%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 85  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.02  
 Intersection Signal Delay: 30.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 83.9%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 59: Beauregard St & N Chambliss St/Plaza at Landmark



Updated 2035 Baseline with Recommended Improvements  
 59: Beauregard St & N Chambliss St/Plaza at Landmark

PM PEAK  
 10/22/2011

| Lane Group              | EBL   | EBT   | EBR  | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 7     | 4     |      | 3     | 8     | 5     | 2     |       | 1     | 6     |
| Permitted Phases        | 4     |       | Free | 8     |       |       | 2     | 2     | 6     |       |
| Minimum Initial (s)     | 4.0   | 4.0   |      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 1.0   | 4.0   |
| Minimum Split (s)       | 11.0  | 36.0  |      | 11.0  | 36.0  | 12.0  | 22.0  | 22.0  | 12.0  | 22.0  |
| Total Split (s)         | 16.0  | 36.0  | 0.0  | 21.0  | 41.0  | 46.0  | 69.0  | 69.0  | 14.0  | 37.0  |
| Total Split (%)         | 11.4% | 25.7% | 0.0% | 15.0% | 29.3% | 32.9% | 49.3% | 49.3% | 10.0% | 26.4% |
| Maximum Green (s)       | 9.0   | 29.0  |      | 14.0  | 34.0  | 39.0  | 62.0  | 62.0  | 7.0   | 30.0  |
| Yellow Time (s)         | 4.0   | 4.0   |      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   |      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   |      | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |      |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   |      | 3.0   | 3.0   | 2.0   | 4.0   | 4.0   | 2.0   | 4.0   |
| Minimum Gap (s)         | 3.0   | 3.0   |      | 3.0   | 3.0   | 2.0   | 4.0   | 4.0   | 2.0   | 4.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  |      | None  | None  | None  | C-Min | C-Min | None  | C-Min |
| Walk Time (s)           | 7.0   |       |      | 7.0   |       |       |       |       |       |       |
| Flash Dont Walk (s)     | 22.0  |       |      | 22.0  |       |       |       |       |       |       |
| Pedestrian Calls (#/hr) | 0     |       |      | 0     |       |       |       |       |       |       |
| 90th %ile Green (s)     | 9.0   | 16.8  |      | 14.0  | 21.8  | 45.6  | 71.3  | 71.3  | 9.9   | 35.6  |
| 90th %ile Term Code     | Max   | Gap   |      | Max   | Hold  | Gap   | Coord | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 9.0   | 14.0  |      | 14.0  | 19.0  | 39.9  | 75.7  | 75.7  | 8.3   | 44.1  |
| 70th %ile Term Code     | Max   | Gap   |      | Max   | Hold  | Gap   | Coord | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 9.0   | 12.2  |      | 14.0  | 17.2  | 34.9  | 78.5  | 78.5  | 7.3   | 50.9  |
| 50th %ile Term Code     | Max   | Gap   |      | Max   | Hold  | Gap   | Coord | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 11.7  | 10.3  |      | 16.7  | 15.3  | 30.1  | 78.4  | 78.4  | 6.6   | 54.9  |
| 30th %ile Term Code     | Max   | Gap   |      | Max   | Hold  | Gap   | Coord | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 9.9   | 7.6   |      | 18.4  | 16.1  | 22.5  | 80.6  | 80.6  | 5.4   | 63.5  |
| 10th %ile Term Code     | Gap   | Gap   |      | Gap   | Hold  | Gap   | Coord | Coord | Gap   | Coord |

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 72 (51%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
61: N Beauregard St/Beauregard St & Route 236

PM PEAK  
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| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|------|------|-------|-------|------|-------|------|-------|-------|-------|------|
| Lane Configurations | ↔↔    | ↔↔   | ↔    | ↔↔    | ↔↔    | ↔    | ↔     | ↔    | ↔     | ↔     | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           | 0%    |      | 0%   |       | 0%    |      | 0%    |      | 0%    |       | 0%    |      |
| Storage Length (ft) | 425   |      | 0    | 215   |       | 500  | 120   |      | 0     | 0     |       | 0    |
| Storage Lanes       | 2     |      | 0    | 1     |       | 1    | 1     |      | 1     | 0     |       | 1    |
| Taper Length (ft)   | 50    |      |      | 50    |       |      | 50    |      |       | 50    |       |      |
| Lane Util. Factor   | 0.97  | 0.91 | 0.91 | 1.00  | 0.91  | 1.00 | 1.00  | 1.00 | 1.00  | 0.95  | 0.95  | 1.00 |
| Ped Bike Factor     | 1.00  |      |      |       | 0.98  |      |       |      | 0.98  |       |       |      |
| Frt                 | 0.994 |      |      |       | 0.850 |      |       |      | 0.850 |       |       |      |
| Flt Protected       | 0.950 |      |      | 0.950 |       |      | 0.950 |      |       | 0.950 | 0.967 |      |
| Satd. Flow (prot)   | 3433  | 5045 | 0    | 1770  | 5085  | 1583 | 1770  | 1863 | 1583  | 1681  | 1711  | 1583 |
| Flt Permitted       | 0.950 |      |      | 0.950 |       |      | 0.950 |      |       | 0.950 | 0.967 |      |
| Satd. Flow (perm)   | 3433  | 5045 | 0    | 1770  | 5085  | 1551 | 1770  | 1863 | 1549  | 1681  | 1711  | 1542 |
| Right Turn on Red   |       |      | Yes  |       |       | Yes  |       |      | Yes   |       |       | Yes  |
| Satd. Flow (RTOR)   | 4     |      |      |       | 249   |      |       |      | 11    |       |       |      |
| Link Speed (mph)    | 40    |      |      |       | 40    |      |       |      | 25    |       |       |      |
| Link Distance (ft)  | 1126  |      |      |       | 1020  |      |       |      | 665   |       |       |      |
| Travel Time (s)     | 19.2  |      |      |       | 17.4  |      |       |      | 18.1  |       |       |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
61: N Beauregard St/Beauregard St & Route 236

PM PEAK  
10/22/2011

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔↔    | ↔↔    | ↔     | ↔↔    | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 325   | 1040  | 115   | 1385  | 600   | 155   | 180   | 130   | 810   | 155   | 515   |
| Turn Type            | Prot  | NA    | Prot  | NA    | pm+ov | Split | NA    | pm+ov | Split | NA    | Perm  |
| Protected Phases     | 5     | 2     | 1     | 6     | 3     | 4     | 4     | 1     | 3     | 3     |       |
| Permitted Phases     |       |       |       |       | 6     |       |       | 4     |       |       | 3     |
| Detector Phase       | 5     | 2     | 1     | 6     | 3     | 4     | 4     | 1     | 3     | 3     | 3     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 8.0   | 20.0  | 8.0   | 20.0  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)    | 15.0  | 26.5  | 15.0  | 28.5  | 36.0  | 36.0  | 36.0  | 15.0  | 36.0  | 36.0  | 36.0  |
| Total Split (s)      | 17.0  | 43.8  | 17.0  | 43.8  | 43.2  | 36.0  | 36.0  | 17.0  | 43.2  | 43.2  | 43.2  |
| Total Split (%)      | 12.1% | 31.3% | 12.1% | 31.3% | 30.9% | 25.7% | 25.7% | 12.1% | 30.9% | 30.9% | 30.9% |
| Yellow Time (s)      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 2.5   | 3.0   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | -3.0  | -2.5  | -3.0  | -2.5  | -3.0  | -3.0  | -3.0  | -3.0  | -5.0  | -5.0  | -5.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | Min   | None  | Min   | C-Min | None  | None  | None  | C-Min | C-Min | C-Min |
| Act Effct Green (s)  | 21.5  | 45.4  | 15.9  | 39.8  | 79.5  | 23.0  | 23.0  | 38.9  | 41.7  | 41.7  | 41.7  |
| Actuated g/C Ratio   | 0.15  | 0.32  | 0.11  | 0.28  | 0.57  | 0.16  | 0.16  | 0.28  | 0.30  | 0.30  | 0.30  |
| v/c Ratio            | 0.66  | 0.71  | 0.62  | 1.03  | 0.65  | 0.57  | 0.63  | 0.32  | 1.03  | 1.03  | 0.82  |
| Control Delay        | 63.0  | 45.1  | 72.8  | 80.3  | 14.0  | 61.1  | 63.4  | 34.6  | 86.7  | 86.7  | 24.2  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 63.0  | 45.1  | 72.8  | 80.3  | 14.0  | 61.1  | 63.4  | 34.6  | 86.7  | 86.7  | 24.2  |
| LOS                  | E     | D     | E     | F     | B     | E     | E     | C     | F     | F     | C     |
| Approach Delay       | 49.3  |       | 61.0  |       | 54.6  |       | 64.9  |       |       |       |       |
| Approach LOS         | D     |       | E     |       | D     |       | E     |       |       |       |       |

Intersection Summary


Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 79 (56%), Referenced to phase 3:SBTL, Start of Green  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.03  
 Intersection Signal Delay: 58.5  
 Intersection LOS: E  
 Intersection Capacity Utilization 88.4%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 61: N Beauregard St/Beauregard St & Route 236



Updated 2035 Baseline with Recommended Improvements  
61: N Beauregard St/Beauregard St & Route 236

PM PEAK  
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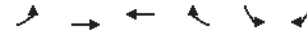
| Lane Group              | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 5     | 2     | 1     | 6     | 3     | 4     | 4     | 1     | 3     | 3     |       |
| Permitted Phases        |       |       |       | 6     | 4     |       |       | 4     |       |       | 3     |
| Minimum Initial (s)     | 8.0   | 20.0  | 8.0   | 20.0  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)       | 15.0  | 26.5  | 15.0  | 28.5  | 36.0  | 36.0  | 36.0  | 15.0  | 36.0  | 36.0  | 36.0  |
| Total Split (s)         | 17.0  | 43.8  | 17.0  | 43.8  | 43.2  | 36.0  | 36.0  | 17.0  | 43.2  | 43.2  | 43.2  |
| Total Split (%)         | 12.1% | 31.3% | 12.1% | 31.3% | 30.9% | 25.7% | 25.7% | 12.1% | 30.9% | 30.9% | 30.9% |
| Maximum Green (s)       | 10.0  | 37.3  | 10.0  | 37.3  | 36.2  | 29.0  | 29.0  | 10.0  | 36.2  | 36.2  | 36.2  |
| Yellow Time (s)         | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 2.5   | 3.0   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | Min   | None  | Min   | C-Min | None  | None  | None  | C-Min | C-Min | C-Min |
| Walk Time (s)           |       |       |       | 7.0   | 7.0   | 7.0   | 7.0   |       | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |       |       | 14.0  | 22.0  | 22.0  | 22.0  |       | 22.0  | 22.0  | 22.0  |
| Pedestrian Calls (#/hr) |       |       |       | 0     | 0     | 0     | 0     |       | 0     | 0     | 0     |
| 90th %ile Green (s)     | 11.7  | 37.3  | 11.7  | 37.3  | 36.2  | 27.3  | 27.3  | 11.7  | 36.2  | 36.2  | 36.2  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Coord | Gap   | Gap   | Max   | Coord | Coord | Coord |
| 70th %ile Green (s)     | 16.4  | 37.3  | 16.4  | 37.3  | 36.2  | 22.6  | 22.6  | 16.4  | 36.2  | 36.2  | 36.2  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Coord | Gap   | Gap   | Max   | Coord | Coord | Coord |
| 50th %ile Green (s)     | 19.1  | 41.7  | 14.7  | 37.3  | 36.2  | 19.9  | 19.9  | 14.7  | 36.2  | 36.2  | 36.2  |
| 50th %ile Term Code     | Max   | Hold  | Gap   | Max   | Coord | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 30th %ile Green (s)     | 21.7  | 46.6  | 12.4  | 37.3  | 36.4  | 17.1  | 17.1  | 12.4  | 36.4  | 36.4  | 36.4  |
| 30th %ile Term Code     | Gap   | Hold  | Gap   | Max   | Coord | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 10th %ile Green (s)     | 23.4  | 51.6  | 9.1   | 37.3  | 38.7  | 13.1  | 13.1  | 9.1   | 38.7  | 38.7  | 38.7  |
| 10th %ile Term Code     | Gap   | Hold  | Gap   | Max   | Coord | Gap   | Gap   | Coord | Coord | Coord | Coord |

Intersection Summary

Cycle Length: 140  
Actuated Cycle Length: 140  
Offset: 79 (56%), Referenced to phase 3:SBTL, Start of Green  
Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
67: Beauregard St & Lincolnia Rd Spur

PM PEAK  
10/22/2011



| Lane Group          | EBL  | EBT  | WBT   | WBR  | SBL  | SBR  |
|---------------------|------|------|-------|------|------|------|
| Lane Configurations |      | ↑↑   | ↑↑    |      |      |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           |      | 0%   | 0%    |      | 0%   |      |
| Storage Length (ft) |      | 0    |       | 0    | 0    | 0    |
| Storage Lanes       |      | 0    |       | 0    | 0    | 0    |
| Taper Length (ft)   |      | 50   |       |      | 50   |      |
| Lane Util. Factor   | 1.00 | 0.95 | 0.95  | 0.95 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      |       |      |      |      |
| Friction            |      |      | 0.950 |      |      |      |
| Flt Protected       |      |      |       |      |      |      |
| Satd. Flow (prot)   | 0    | 3539 | 3362  | 0    | 0    | 0    |
| Flt Permitted       |      |      |       |      |      |      |
| Satd. Flow (perm)   | 0    | 3539 | 3362  | 0    | 0    | 0    |
| Link Speed (mph)    |      | 35   | 35    |      | 25   |      |
| Link Distance (ft)  |      | 464  | 545   |      | 446  |      |
| Travel Time (s)     |      | 9.0  | 10.6  |      | 12.2 |      |

Intersection Summary

Area Type: Other

| Lane Group          | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
|---------------------|------|------|------|------|------|------|
| Lane Configurations | ↔↔   |      |      | ↔↔   | ↔↔   |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12   | 12   | 12   | 12   |
| Grade (%)           | 0%   |      |      | 0%   | 0%   |      |
| Storage Length (ft) |      | 0    | 0    |      | 0    | 0    |
| Storage Lanes       |      | 0    | 0    |      | 1    | 0    |
| Taper Length (ft)   |      |      | 50   |      | 50   |      |
| Lane Util. Factor   | 0.95 | 0.95 | 0.95 | 0.95 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      |      |      |      |      |
| <b>Fr</b>           |      |      |      |      |      |      |
| Flt Protected       |      |      |      |      |      |      |
| Satd. Flow (prot)   | 3539 | 0    | 0    | 3539 | 1863 | 0    |
| Flt Permitted       |      |      |      |      |      |      |
| Satd. Flow (perm)   | 3539 | 0    | 0    | 3539 | 1863 | 0    |
| Right Turn on Red   |      | Yes  |      |      |      | Yes  |
| Satd. Flow (RTOR)   |      |      |      |      |      |      |
| Link Speed (mph)    | 35   |      |      | 35   | 30   |      |
| Link Distance (ft)  | 849  |      |      | 826  | 612  |      |
| Travel Time (s)     | 16.5 |      |      | 16.1 | 13.9 |      |

**Intersection Summary**

Area Type: Other

| Lane Group           | EBT   | WBT   | ø2   |
|----------------------|-------|-------|------|
| Lane Configurations  | ↔↔    | ↔↔    |      |
| Volume (vph)         | 830   | 645   |      |
| Turn Type            | NA    | NA    |      |
| Protected Phases     | 4     | 8     | 2    |
| Permitted Phases     |       |       |      |
| Detector Phase       | 4     | 8     |      |
| Switch Phase         |       |       |      |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0  |
| Minimum Split (s)    | 20.0  | 20.0  | 20.0 |
| Total Split (s)      | 40.0  | 40.0  | 20.0 |
| Total Split (%)      | 66.7% | 66.7% | 33%  |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5  |
| All-Red Time (s)     | 0.5   | 0.5   | 0.5  |
| Lost Time Adjust (s) | 0.0   | 0.0   |      |
| Total Lost Time (s)  | 4.0   | 4.0   |      |

**Lead/Lag**

Lead-Lag Optimize?

Recall Mode: None None Max

Act Effct Green (s): 17.5 17.5

Actuated g/C Ratio: 0.42 0.42

v/c Ratio: 0.60 0.47

Control Delay: 11.0 9.6

Queue Delay: 0.0 0.0

Total Delay: 11.0 9.6

LOS: B A

Approach Delay: 11.0 9.6

Approach LOS: B A

**Intersection Summary**

Cycle Length: 60

Actuated Cycle Length: 41.8

Natural Cycle: 40

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 10.4

Intersection LOS: B

Intersection Capacity Utilization 72.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 72: South HOV Ramp & Seminary Rd



Updated 2035 Baseline with Recommended Improvements  
72: South HOV Ramp & Seminary Rd

PM PEAK  
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|                         | →     | ←     |      |
|-------------------------|-------|-------|------|
| Lane Group              | EBT   | WBT   | ø2   |
| Protected Phases        | 4     | 8     | 2    |
| Permitted Phases        |       |       |      |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0  |
| Minimum Split (s)       | 20.0  | 20.0  | 20.0 |
| Total Split (s)         | 40.0  | 40.0  | 20.0 |
| Total Split (%)         | 66.7% | 66.7% | 33%  |
| Maximum Green (s)       | 36.0  | 36.0  | 16.0 |
| Yellow Time (s)         | 3.5   | 3.5   | 3.5  |
| All-Red Time (s)        | 0.5   | 0.5   | 0.5  |
| Lead/Lag                |       |       |      |
| Lead-Lag Optimize?      |       |       |      |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0  |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0  |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0  |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0  |
| Recall Mode             | None  | None  | Max  |
| Walk Time (s)           | 5.0   | 5.0   | 5.0  |
| Flash Dont Walk (s)     | 11.0  | 11.0  | 11.0 |
| Pedestrian Calls (#/hr) | 0     | 0     | 0    |
| 90th %ile Green (s)     | 24.9  | 24.9  | 16.0 |
| 90th %ile Term Code     | Gap   | Hold  | MaxR |
| 70th %ile Green (s)     | 20.1  | 20.1  | 16.0 |
| 70th %ile Term Code     | Gap   | Hold  | MaxR |
| 50th %ile Green (s)     | 17.4  | 17.4  | 16.0 |
| 50th %ile Term Code     | Gap   | Hold  | MaxR |
| 30th %ile Green (s)     | 14.8  | 14.8  | 16.0 |
| 30th %ile Term Code     | Gap   | Hold  | MaxR |
| 10th %ile Green (s)     | 11.8  | 11.8  | 16.0 |
| 10th %ile Term Code     | Gap   | Hold  | MaxR |

**Intersection Summary**

|                                |
|--------------------------------|
| Cycle Length: 60               |
| Actuated Cycle Length: 41.8    |
| Control Type: Semi Act-Uncoord |
| 90th %ile Actuated Cycle: 48.9 |
| 70th %ile Actuated Cycle: 44.1 |
| 50th %ile Actuated Cycle: 41.4 |
| 30th %ile Actuated Cycle: 38.8 |
| 10th %ile Actuated Cycle: 35.8 |

Updated 2035 Baseline with Recommended Improvements  
90: N Jordan St & Seminary Rd/ Seminary Rd

PM PEAK  
10/22/2011

|                     | →     | ↘    | ↙    | ←     | ↖     | ↗     |
|---------------------|-------|------|------|-------|-------|-------|
| Lane Group          | EBT   | EBR  | WBL  | WBT   | NBL   | NBR   |
| Lane Configurations | ↕↕    |      |      | ↕↕    | ↕↕    | ↕↕    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900  |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12    |
| Grade (%)           | 0%    |      |      | 0%    | 0%    |       |
| Storage Length (ft) |       | 0    | 0    |       | 0     | 250   |
| Storage Lanes       |       | 0    | 0    |       | 1     | 1     |
| Taper Length (ft)   |       |      | 50   |       | 50    |       |
| Lane Util. Factor   | 0.95  | 0.95 | 0.95 | 0.95  | 1.00  | 1.00  |
| Ped Bike Factor     | 0.99  |      |      |       |       |       |
| Frt                 | 0.953 |      |      |       |       | 0.850 |
| Flt Protected       |       |      |      | 0.996 | 0.950 |       |
| Satd. Flow (prot)   | 3337  | 0    | 0    | 3525  | 1770  | 1583  |
| Flt Permitted       |       |      |      | 0.720 | 0.950 |       |
| Satd. Flow (perm)   | 3337  | 0    | 0    | 2548  | 1770  | 1583  |
| Right Turn on Red   |       | Yes  |      |       |       | Yes   |
| Satd. Flow (RTOR)   | 132   |      |      |       |       | 16    |
| Link Speed (mph)    | 35    |      |      | 35    | 25    |       |
| Link Distance (ft)  | 759   |      |      | 747   | 1370  |       |
| Travel Time (s)     | 14.8  |      |      | 14.6  | 37.4  |       |

**Intersection Summary**

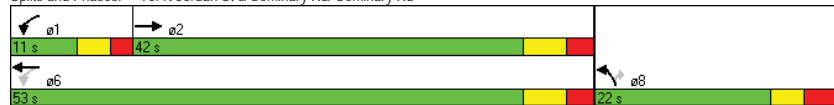
Area Type: Other

| Lane Group           | EBT   | WBL   | WBT   | NBL   | NBR   |
|----------------------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 950   | 55    | 670   | 220   | 15    |
| Turn Type            | NA    | pm+pt | NA    | NA    | Perm  |
| Protected Phases     | 2     | 1     | 6     | 8     |       |
| Permitted Phases     |       | 6     |       |       | 8     |
| Detector Phase       | 2     | 1     | 6     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 10.0  | 6.0   | 16.0  | 6.0   | 6.0   |
| Minimum Split (s)    | 30.5  | 11.0  | 30.5  | 22.0  | 22.0  |
| Total Split (s)      | 42.0  | 11.0  | 53.0  | 22.0  | 22.0  |
| Total Split (%)      | 56.0% | 14.7% | 70.7% | 29.3% | 29.3% |
| Yellow Time (s)      | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.5   | 2.0   | 2.5   | 3.0   | 3.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.5   | 5.0   | 6.5   | 6.0   | 6.0   |
| Lead/Lag             | Lag   | Lead  |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |
| Recall Mode          | None  | None  | Max   | None  | None  |
| Act Effct Green (s)  | 47.8  |       | 47.8  | 13.8  | 13.8  |
| Actuated g/C Ratio   | 0.65  |       | 0.65  | 0.19  | 0.19  |
| v/c Ratio            | 0.67  |       | 0.47  | 0.72  | 0.05  |
| Control Delay        | 9.7   |       | 8.3   | 40.9  | 12.4  |
| Queue Delay          | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Total Delay          | 9.7   |       | 8.3   | 40.9  | 12.4  |
| LOS                  | A     |       | A     | D     | B     |
| Approach Delay       | 9.7   |       | 8.3   | 39.1  |       |
| Approach LOS         | A     |       | A     | D     |       |

**Intersection Summary**

Cycle Length: 75  
 Actuated Cycle Length: 74.1  
 Natural Cycle: 75  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.72  
 Intersection Signal Delay: 12.2  
 Intersection Capacity Utilization 83.2%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service E

Splits and Phases: 90: N Jordan St & Seminary Rd/ Seminary Rd



| Lane Group              | EBT   | WBL   | WBT   | NBL   | NBR   |
|-------------------------|-------|-------|-------|-------|-------|
| Protected Phases        | 2     | 1     | 6     | 8     |       |
| Permitted Phases        |       | 6     |       |       | 8     |
| Minimum Initial (s)     | 10.0  | 6.0   | 16.0  | 6.0   | 6.0   |
| Minimum Split (s)       | 30.5  | 11.0  | 30.5  | 22.0  | 22.0  |
| Total Split (s)         | 42.0  | 11.0  | 53.0  | 22.0  | 22.0  |
| Total Split (%)         | 56.0% | 14.7% | 70.7% | 29.3% | 29.3% |
| Maximum Green (s)       | 35.5  | 6.0   | 46.5  | 16.0  | 16.0  |
| Yellow Time (s)         | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.5   | 2.0   | 2.5   | 3.0   | 3.0   |
| Lead/Lag                | Lag   | Lead  |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | Max   | None  | None  |
| Walk Time (s)           | 12.0  |       | 12.0  | 4.0   | 4.0   |
| Flash Dont Walk (s)     | 12.0  |       | 12.0  | 12.0  | 12.0  |
| Pedestrian Calls (#/hr) | 0     |       | 0     | 0     | 0     |
| 90th %ile Green (s)     | 46.5  | 0.0   | 46.5  | 16.0  | 16.0  |
| 90th %ile Term Code     | Hold  | Skip  | MaxR  | Max   | Max   |
| 70th %ile Green (s)     | 46.5  | 0.0   | 46.5  | 16.0  | 16.0  |
| 70th %ile Term Code     | Hold  | Skip  | MaxR  | Max   | Max   |
| 50th %ile Green (s)     | 46.5  | 0.0   | 46.5  | 15.0  | 15.0  |
| 50th %ile Term Code     | Hold  | Skip  | MaxR  | Gap   | Gap   |
| 30th %ile Green (s)     | 46.5  | 0.0   | 46.5  | 12.5  | 12.5  |
| 30th %ile Term Code     | Hold  | Skip  | MaxR  | Gap   | Gap   |
| 10th %ile Green (s)     | 52.8  | 0.0   | 52.8  | 9.5   | 9.5   |
| 10th %ile Term Code     | Dwell | Skip  | Dwell | Gap   | Gap   |

**Intersection Summary**

Cycle Length: 75  
 Actuated Cycle Length: 74.1  
 Control Type: Semi Act-Uncoord  
 90th %ile Actuated Cycle: 75  
 70th %ile Actuated Cycle: 75  
 50th %ile Actuated Cycle: 74  
 30th %ile Actuated Cycle: 71.5  
 10th %ile Actuated Cycle: 74.8

Updated 2035 Baseline with Recommended Improvements  
93: Hammond M.S./Encore Apts & Seminary Rd

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| Lane Group          | EBL  | EBT   | EBR  | WBL  | WBT   | WBR  | NBL  | NBT   | NBR   | SBL   | SBT  | SBR   |
|---------------------|------|-------|------|------|-------|------|------|-------|-------|-------|------|-------|
| Lane Configurations |      | ↕↕    |      |      | ↕↕    |      |      | ↕     | ↕     | ↕     |      | ↕     |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12    | 12    | 12   | 12    |
| Grade (%)           |      | 0%    |      |      | 0%    |      |      | 0%    |       |       | 0%   |       |
| Storage Length (ft) | 0    |       | 0    | 0    |       | 0    | 0    |       | 0     | 0     |      | 0     |
| Storage Lanes       | 0    |       | 0    | 0    |       | 0    | 0    |       | 1     | 1     |      | 1     |
| Taper Length (ft)   | 50   |       |      | 50   |       |      | 50   |       |       | 50    |      |       |
| Lane Util. Factor   | 0.95 | 0.95  | 1.00 | 1.00 | 0.95  | 0.95 | 1.00 | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  |
| Ped Bike Factor     |      |       |      |      | 0.995 |      |      |       | 0.850 |       |      | 0.850 |
| Frt Protected       |      | 0.998 |      |      |       |      |      | 0.950 |       | 0.950 |      |       |
| Satd. Flow (prot)   | 0    | 3532  | 0    | 0    | 3522  | 0    | 0    | 1770  | 1583  | 1770  | 0    | 1583  |
| Frt Permitted       |      | 0.864 |      |      |       |      |      | 0.950 |       |       |      |       |
| Satd. Flow (perm)   | 0    | 3058  | 0    | 0    | 3522  | 0    | 0    | 1770  | 1583  | 1863  | 0    | 1583  |
| Right Turn on Red   |      |       | Yes  |      |       | Yes  |      | Yes   | Yes   |       | Yes  | Yes   |
| Satd. Flow (RTOR)   |      |       |      |      | 8     |      |      |       | 5     |       |      | 11    |
| Link Speed (mph)    |      | 35    |      |      |       | 35   |      |       | 25    |       |      | 25    |
| Link Distance (ft)  |      | 471   |      |      |       | 295  |      |       | 257   |       |      | 372   |
| Travel Time (s)     |      | 9.2   |      |      |       | 5.7  |      |       | 7.0   |       |      | 10.1  |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
93: Hammond M.S./Encore Apts & Seminary Rd

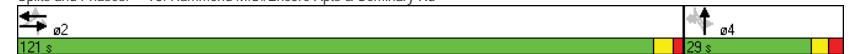
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| Lane Group           | EBL   | EBT   | WBT   | NBT   | NBR    | SBL   | SBR    |
|----------------------|-------|-------|-------|-------|--------|-------|--------|
| Lane Configurations  |       | ↕↕    | ↕↕    | ↕     | ↕      | ↕     | ↕      |
| Volume (vph)         | 50    | 1455  | 805   | 0     | 5      | 5     | 10     |
| Turn Type            | Perm  | NA    | NA    | NA    | custom | D.Pm  | custom |
| Protected Phases     |       | 2     | 2     | 4     |        |       |        |
| Permitted Phases     |       | 2     |       |       | 2      | 4     | 4      |
| Detector Phase       |       | 2     | 2     | 4     | 2      | 4     | 4      |
| Switch Phase         |       |       |       |       |        |       |        |
| Minimum Initial (s)  | 10.0  | 10.0  | 10.0  | 6.0   | 10.0   | 6.0   | 6.0    |
| Minimum Split (s)    | 21.5  | 21.5  | 21.5  | 29.0  | 21.5   | 29.0  | 29.0   |
| Total Split (s)      | 121.0 | 121.0 | 121.0 | 29.0  | 121.0  | 29.0  | 29.0   |
| Total Split (%)      | 80.7% | 80.7% | 80.7% | 19.3% | 80.7%  | 19.3% | 19.3%  |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.0   | 3.5    | 3.0   | 3.0    |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 3.0   | 2.0    | 3.0   | 3.0    |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0    | 0.0   | 0.0    |
| Total Lost Time (s)  | 5.5   | 5.5   | 5.5   | 6.0   | 5.5    | 6.0   | 6.0    |
| Lead/Lag             |       |       |       |       |        |       |        |
| Lead-Lag Optimize?   |       |       |       |       |        |       |        |
| Recall Mode          | C-Max | C-Max | C-Max | None  | C-Max  | None  | None   |
| Act Effct Green (s)  |       | 139.1 | 139.1 | 6.4   | 139.1  | 6.4   | 6.4    |
| Actuated g/C Ratio   |       | 0.93  | 0.93  | 0.04  | 0.93   | 0.04  | 0.04   |
| v/c Ratio            |       | 0.57  | 0.27  | 0.07  | 0.00   | 0.06  | 0.14   |
| Control Delay        |       | 2.4   | 0.2   | 70.4  | 0.6    | 70.2  | 35.5   |
| Queue Delay          |       | 0.6   | 0.3   | 0.0   | 0.0    | 0.0   | 0.0    |
| Total Delay          |       | 3.0   | 0.5   | 70.4  | 0.6    | 70.2  | 35.5   |
| LOS                  |       | A     | A     | E     | A      | E     | D      |
| Approach Delay       |       | 3.0   | 0.5   | 35.5  |        |       |        |
| Approach LOS         |       | A     | A     | D     |        |       |        |

Intersection Summary

Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 129 (86%), Referenced to phase 2:WBEB, Start of Yellow  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.57  
 Intersection Signal Delay: 2.5  
 Intersection Capacity Utilization 84.0%  
 Analysis Period (min) 15  
 Intersection LOS: A  
 ICU Level of Service E

Splits and Phases: 93: Hammond M.S./Encore Apts & Seminary Rd





Updated 2035 Baseline with Recommended Improvements  
93: Hammond M.S./Encore Apts & Seminary Rd

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| Lane Group              | EBL   | EBT   | WBT   | NBT   | NBR   | SBL   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 2     | 2     | 4     |       |       |       |
| Permitted Phases        | 2     |       |       |       | 2     | 4     | 4     |
| Minimum Initial (s)     | 10.0  | 10.0  | 10.0  | 6.0   | 10.0  | 6.0   | 6.0   |
| Minimum Split (s)       | 21.5  | 21.5  | 21.5  | 29.0  | 21.5  | 29.0  | 29.0  |
| Total Split (s)         | 121.0 | 121.0 | 121.0 | 29.0  | 121.0 | 29.0  | 29.0  |
| Total Split (%)         | 80.7% | 80.7% | 80.7% | 19.3% | 80.7% | 19.3% | 19.3% |
| Maximum Green (s)       | 115.5 | 115.5 | 115.5 | 23.0  | 115.5 | 23.0  | 23.0  |
| Yellow Time (s)         | 3.5   | 3.5   | 3.5   | 3.0   | 3.5   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   |
| Lead/Lag                |       |       |       |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | C-Max | C-Max | C-Max | None  | C-Max | None  | None  |
| Walk Time (s)           |       |       |       | 7.0   |       | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |       |       | 16.0  |       | 16.0  | 16.0  |
| Pedestrian Calls (#/hr) |       |       |       | 0     |       | 0     | 0     |
| 90th %ile Green (s)     | 131.1 | 131.1 | 131.1 | 7.4   | 131.1 | 7.4   | 7.4   |
| 90th %ile Term Code     | Coord | Coord | Coord | Gap   | Coord | Gap   | Gap   |
| 70th %ile Green (s)     | 131.9 | 131.9 | 131.9 | 6.6   | 131.9 | 6.6   | 6.6   |
| 70th %ile Term Code     | Coord | Coord | Coord | Gap   | Coord | Gap   | Gap   |
| 50th %ile Green (s)     | 132.5 | 132.5 | 132.5 | 6.0   | 132.5 | 6.0   | 6.0   |
| 50th %ile Term Code     | Coord | Coord | Coord | Min   | Coord | Min   | Min   |
| 30th %ile Green (s)     | 144.5 | 144.5 | 144.5 | 0.0   | 144.5 | 0.0   | 0.0   |
| 30th %ile Term Code     | Coord | Coord | Coord | Skip  | Coord | Skip  | Skip  |
| 10th %ile Green (s)     | 144.5 | 144.5 | 144.5 | 0.0   | 144.5 | 0.0   | 0.0   |
| 10th %ile Term Code     | Coord | Coord | Coord | Skip  | Coord | Skip  | Skip  |

Intersection Summary

Cycle Length: 150  
Actuated Cycle Length: 150  
Offset: 129 (86%), Referenced to phase 2:WBEB, Start of Yellow  
Control Type: Actuated-Coordinated

Updated 2035 Baseline with Recommended Improvements  
100: Kenmore Ave & Seminary Rd

PM PEAK  
10/22/2011

| Lane Group          | EBL  | EBT   | EBR  | WBL  | WBT   | WBR  | NBL  | NBT  | NBR   | SBL  | SBT  | SBR   |
|---------------------|------|-------|------|------|-------|------|------|------|-------|------|------|-------|
| Lane Configurations |      | ↑↑↑   |      |      | ↑↑↑   |      |      |      | ↑     |      |      | ↑     |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12   | 12    | 12   | 12   | 12    |
| Grade (%)           |      | 0%    |      |      | 0%    |      |      | 0%   |       |      | 0%   |       |
| Storage Length (ft) | 0    |       | 0    | 0    |       | 0    | 0    |      | 0     | 0    |      | 0     |
| Storage Lanes       | 0    |       | 0    | 0    |       | 0    | 0    |      | 1     | 0    |      | 1     |
| Taper Length (ft)   | 50   |       | 50   |      | 50    |      | 50   |      | 50    |      | 50   |       |
| Lane Util. Factor   | 1.00 | 0.91  | 0.91 | 1.00 | 0.91  | 0.91 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  |
| Ped Bike Factor     |      |       |      |      |       |      |      |      |       |      |      |       |
| Frt                 |      | 0.977 |      |      | 0.990 |      |      |      | 0.865 |      |      | 0.865 |
| Flt Protected       |      |       |      |      |       |      |      |      |       |      |      |       |
| Satd. Flow (prot)   | 0    | 4968  | 0    | 0    | 5034  | 0    | 0    | 0    | 1611  | 0    | 0    | 1611  |
| Flt Permitted       |      |       |      |      |       |      |      |      |       |      |      |       |
| Satd. Flow (perm)   | 0    | 4968  | 0    | 0    | 5034  | 0    | 0    | 0    | 1611  | 0    | 0    | 1611  |
| Link Speed (mph)    |      | 35    |      |      | 35    |      |      |      | 30    |      |      | 30    |
| Link Distance (ft)  |      | 105   |      |      | 248   |      |      |      | 787   |      |      | 674   |
| Travel Time (s)     |      | 2.0   |      |      | 4.8   |      |      |      | 17.9  |      |      | 15.3  |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
102: Seminary Rd (N) & North HOV Ramp

PM PEAK  
10/22/2011

| Lane Group          | EBL  | EBT  | WBT  | WBR  | SBL   | SBR  |
|---------------------|------|------|------|------|-------|------|
| Lane Configurations |      |      | ↑↑↑  |      |       | ↑    |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12   | 12   | 12   | 12    | 12   |
| Grade (%)           |      | 0%   | 0%   |      | 0%    |      |
| Storage Length (ft) | 0    |      |      | 0    | 0     | 0    |
| Storage Lanes       | 0    |      |      | 0    | 0     | 1    |
| Taper Length (ft)   | 50   |      |      |      | 50    |      |
| Lane Util. Factor   | 1.00 | 1.00 | 0.91 | 0.91 | 1.00  | 1.00 |
| Ped Bike Factor     |      |      |      |      |       |      |
| Frt                 |      |      |      |      | 0.865 |      |
| Flt Protected       |      |      |      |      |       |      |
| Satd. Flow (prot)   | 0    | 0    | 5085 | 0    | 0     | 1611 |
| Flt Permitted       |      |      |      |      |       |      |
| Satd. Flow (perm)   | 0    | 0    | 5085 | 0    | 0     | 1611 |
| Link Speed (mph)    |      | 35   | 35   |      | 30    |      |
| Link Distance (ft)  |      | 172  | 135  |      | 561   |      |
| Travel Time (s)     |      | 3.4  | 2.6  |      | 12.8  |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
191: I-395 SB On-Ramp & Seminary Rd (S)

PM PEAK  
10/22/2011

| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL   | SBT   | SBR  |
|---------------------|------|-------|-------|------|------|------|------|------|------|-------|-------|------|
| Lane Configurations |      | ↑↑    | ↑     |      |      |      |      |      |      | ↑     | ↑↑    |      |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12    | 12    | 12   |
| Grade (%)           |      | 0%    |       |      | 0%   |      |      | 0%   |      |       | 0%    |      |
| Storage Length (ft) | 0    |       | 0     | 0    |      | 0    | 0    |      | 0    | 0     |       | 0    |
| Storage Lanes       | 0    |       | 1     | 0    |      | 0    | 0    |      | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50   |       |       | 50   |      |      | 50   |      |      | 50    |       |      |
| Lane Util. Factor   | 1.00 | 0.91  | 0.91  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91  | 0.91  | 1.00 |
| Ped Bike Factor     |      |       |       |      |      |      |      |      |      |       |       |      |
| Frt                 |      | 0.939 | 0.850 |      |      |      |      |      |      |       |       |      |
| Flt Protected       |      |       |       |      |      |      |      |      |      | 0.950 | 0.975 |      |
| Satd. Flow (prot)   | 0    | 3183  | 1441  | 0    | 0    | 0    | 0    | 0    | 0    | 1610  | 3305  | 0    |
| Flt Permitted       |      |       |       |      |      |      |      |      |      | 0.950 | 0.975 |      |
| Satd. Flow (perm)   | 0    | 3183  | 1441  | 0    | 0    | 0    | 0    | 0    | 0    | 1610  | 3305  | 0    |
| Right Turn on Red   |      |       | Yes   |      |      | Yes  |      |      | Yes  | Yes   | Yes   | Yes  |
| Satd. Flow (RTOR)   |      | 102   | 702   |      |      |      |      |      |      | 48    | 48    |      |
| Link Speed (mph)    |      | 35    |       |      | 35   |      |      | 35   |      |       | 35    |      |
| Link Distance (ft)  |      | 382   |       |      | 349  |      |      | 1378 |      |       | 278   |      |
| Travel Time (s)     |      | 7.4   |       |      | 6.8  |      |      | 26.8 |      |       | 5.4   |      |

Intersection Summary

Area Type: Other

Updated 2035 Baseline with Recommended Improvements  
191: I-395 SB On-Ramp & Seminary Rd (S)

PM PEAK  
10/22/2011

| Lane Group           | EBT   | EBR   | SBL   | SBT   | ø1   | ø3   | ø4   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  | ↔↔    | ↔     | ↔     | ↔↔    |      |      |      |
| Volume (vph)         | 960   | 1395  | 630   | 295   |      |      |      |
| Turn Type            | NA    | Free  | Perm  | NA    |      |      |      |
| Protected Phases     | 2     |       |       | 1 3 4 | 1    | 3    | 4    |
| Permitted Phases     |       | Free  | 1 3 4 |       |      |      |      |
| Detector Phase       | 2     |       | 1 3 4 | 1 3 4 |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  | 10.0  |       |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    | 22.5  |       |       |       | 22.5 | 22.5 | 23.0 |
| Total Split (s)      | 84.0  | 0.0   | 96.0  | 96.0  | 39.0 | 34.0 | 23.0 |
| Total Split (%)      | 46.7% | 0.0%  | 53.3% | 53.3% | 22%  | 19%  | 13%  |
| Yellow Time (s)      | 4.0   |       |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     | 2.5   |       |       |       | 2.5  | 2.5  | 3.0  |
| Lost Time Adjust (s) | -2.5  | 0.0   | -2.5  | -2.5  |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             | Lag   |       |       |       | Lead | Lead | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          | Min   |       |       |       | Min  | Min  | Min  |
| Act Effct Green (s)  | 80.0  | 180.0 | 92.0  | 92.0  |      |      |      |
| Actuated g/C Ratio   | 0.44  | 1.00  | 0.51  | 0.51  |      |      |      |
| v/c Ratio            | 1.18  | 0.55  | 0.40  | 0.38  |      |      |      |
| Control Delay        | 129.8 | 1.5   | 5.1   | 32.0  |      |      |      |
| Queue Delay          | 0.0   | 0.0   | 47.9  | 3.4   |      |      |      |
| Total Delay          | 129.8 | 1.5   | 53.1  | 35.4  |      |      |      |
| LOS                  | F     | A     | D     | D     |      |      |      |
| Approach Delay       | 89.6  |       |       | 41.4  |      |      |      |
| Approach LOS         | F     |       |       | D     |      |      |      |

Intersection Summary

Cycle Length: 180  
 Actuated Cycle Length: 180  
 Natural Cycle: 145  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.18  
 Intersection Signal Delay: 76.0  
 Intersection LOS: E  
 Intersection Capacity Utilization 65.7%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 191: I-395 SB On-Ramp & Seminary Rd (S)



Updated 2035 Baseline with Recommended Improvements  
191: I-395 SB On-Ramp & Seminary Rd (S)

PM PEAK  
10/22/2011

| Lane Group              | EBT   | EBR  | SBL   | SBT   | ø1   | ø3   | ø4   |
|-------------------------|-------|------|-------|-------|------|------|------|
| Protected Phases        | 2     |      |       | 1 3 4 | 1    | 3    | 4    |
| Permitted Phases        |       | Free | 1 3 4 |       |      |      |      |
| Minimum Initial (s)     | 10.0  |      |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       | 22.5  |      |       |       | 22.5 | 22.5 | 23.0 |
| Total Split (s)         | 84.0  | 0.0  | 96.0  | 96.0  | 39.0 | 34.0 | 23.0 |
| Total Split (%)         | 46.7% | 0.0% | 53.3% | 53.3% | 22%  | 19%  | 13%  |
| Maximum Green (s)       | 77.5  |      |       |       | 32.5 | 27.5 | 16.0 |
| Yellow Time (s)         | 4.0   |      |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        | 2.5   |      |       |       | 2.5  | 2.5  | 3.0  |
| Lead/Lag                | Lag   |      |       |       | Lead | Lead | Lag  |
| Lead-Lag Optimize?      |       |      |       |       |      |      |      |
| Vehicle Extension (s)   | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Minimum Gap (s)         | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Recall Mode             | Min   |      |       |       | Min  | Min  | Min  |
| Walk Time (s)           |       |      |       |       |      |      |      |
| Flash Dont Walk (s)     |       |      |       |       |      |      |      |
| Pedestrian Calls (#/hr) |       |      |       |       |      |      |      |
| 90th %ile Green (s)     | 77.5  |      |       |       | 32.5 | 27.5 | 16.0 |
| 90th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 70th %ile Green (s)     | 77.5  |      |       |       | 32.5 | 27.5 | 16.0 |
| 70th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 50th %ile Green (s)     | 77.5  |      |       |       | 32.5 | 27.5 | 16.0 |
| 50th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 30th %ile Green (s)     | 77.5  |      |       |       | 32.5 | 27.5 | 16.0 |
| 30th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 10th %ile Green (s)     | 77.5  |      |       |       | 32.5 | 27.5 | 16.0 |
| 10th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |

Intersection Summary

Cycle Length: 180  
 Actuated Cycle Length: 180  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 180  
 70th %ile Actuated Cycle: 180  
 50th %ile Actuated Cycle: 180  
 30th %ile Actuated Cycle: 180  
 10th %ile Actuated Cycle: 180

Updated 2035 Baseline with Recommended Improvements  
192: I-395 SB On-Ramp/I-395 SB Off-Ramp & Seminary Rd (N)

PM PEAK  
10/22/2011

| Lane Group          | EBL  | EBT  | EBR  | WBL   | WBT   | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR   |
|---------------------|------|------|------|-------|-------|------|------|------|------|------|------|-------|
| Lane Configurations |      |      |      | ↔     | ↔     |      |      |      |      |      | ↔    | ↔     |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12   | 12   | 12    | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12    |
| Grade (%)           | 0%   |      |      | 0%    |       |      | 0%   |      |      | 0%   |      |       |
| Storage Length (ft) | 0    | 0    | 0    | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 320   |
| Storage Lanes       | 0    | 0    | 0    | 1     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 1     |
| Taper Length (ft)   | 50   | 50   | 50   | 50    | 50    | 50   | 50   | 50   | 50   | 50   | 50   | 50    |
| Lane Util. Factor   | 1.00 | 1.00 | 1.00 | 0.91  | 0.91  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00  |
| Ped Bike Factor     | Frt  |      |      |       |       |      |      |      |      |      |      |       |
|                     |      |      |      |       |       |      |      |      |      |      |      | 0.850 |
| Flt Protected       |      |      |      | 0.950 | 0.998 |      |      |      |      |      |      |       |
| Satd. Flow (prot)   | 0    | 0    | 0    | 1610  | 3383  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583  |
| Flt Permitted       |      |      |      | 0.950 | 0.998 |      |      |      |      |      |      |       |
| Satd. Flow (perm)   | 0    | 0    | 0    | 1610  | 3383  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583  |
| Right Turn on Red   |      |      |      | Yes   | Yes   | Yes  |      |      |      | Yes  |      |       |
| Satd. Flow (RTOR)   |      |      |      | 4     | 4     |      |      |      |      |      |      |       |
| Link Speed (mph)    |      |      |      |       | 30    | 35   |      |      |      |      | 35   |       |
| Link Distance (ft)  |      |      |      |       | 333   | 172  |      |      |      |      | 1472 |       |
| Travel Time (s)     |      |      |      |       | 7.6   | 3.4  |      |      |      |      | 5.4  | 28.7  |

Intersection Summary

Area Type: Other

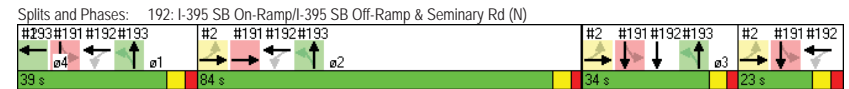
Updated 2035 Baseline with Recommended Improvements  
192: I-395 SB On-Ramp/I-395 SB Off-Ramp & Seminary Rd (N)

PM PEAK  
10/22/2011

| Lane Group           | WBL   | WBT   | SBT   | SBR   | ø1   | ø2   | ø4   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     |      |      |      |
| Volume (vph)         | 295   | 895   | 630   | 420   |      |      |      |
| Turn Type            | Perm  | NA    | NA    | Free  |      |      |      |
| Protected Phases     | 1 2 4 |       | 3     |       | 1    | 2    | 4    |
| Permitted Phases     | 1 2 4 |       | 3     | Free  |      |      |      |
| Detector Phase       | 1 2 4 |       | 3     |       |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  |       |       | 10.0  |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    |       |       | 22.5  |       | 22.5 | 22.5 | 23.0 |
| Total Split (s)      | 146.0 | 146.0 | 34.0  | 0.0   | 39.0 | 84.0 | 23.0 |
| Total Split (%)      | 81.1% | 81.1% | 18.9% | 0.0%  | 22%  | 47%  | 13%  |
| Yellow Time (s)      |       |       | 4.0   |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     |       |       | 2.5   |       | 2.5  | 2.5  | 3.0  |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | 0.0   |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             |       |       | Lead  |       | Lead | Lag  | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          |       |       | Min   |       | Min  | Min  | Min  |
| Act Effct Green (s)  | 142.0 | 142.0 | 30.0  | 180.0 |      |      |      |
| Actuated g/C Ratio   | 0.79  | 0.79  | 0.17  | 1.00  |      |      |      |
| v/c Ratio            | 0.22  | 0.37  | 1.15  | 0.29  |      |      |      |
| Control Delay        | 10.1  | 4.5   | 148.1 | 0.5   |      |      |      |
| Queue Delay          | 0.1   | 4.9   | 4.2   | 0.0   |      |      |      |
| Total Delay          | 10.2  | 9.4   | 152.3 | 0.5   |      |      |      |
| LOS                  | B     |       | A     | F     | A    |      |      |
| Approach Delay       | 9.6   |       | 91.5  |       |      |      |      |
| Approach LOS         | A     |       | F     |       |      |      |      |


Intersection Summary

Cycle Length: 180  
 Actuated Cycle Length: 180  
 Natural Cycle: 145  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.18  
 Intersection Signal Delay: 48.0  
 Intersection Capacity Utilization 65.5%  
 Analysis Period (min) 15  
 Intersection LOS: D  
 ICU Level of Service C



Updated 2035 Baseline with Recommended Improvements  
 192: I-395 SB On-Ramp/I-395 SB Off-Ramp & Seminary Rd (N)

PM PEAK  
 10/22/2011




| Lane Group              | WBL   | WBT   | SBT   | SBR  | ø1   | ø2   | ø4   |
|-------------------------|-------|-------|-------|------|------|------|------|
| Protected Phases        |       | 1 2 4 | 3     |      | 1    | 2    | 4    |
| Permitted Phases        | 1 2 4 |       |       | Free |      |      |      |
| Minimum Initial (s)     |       |       | 10.0  |      | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       |       |       | 22.5  |      | 22.5 | 22.5 | 23.0 |
| Total Split (s)         | 146.0 | 146.0 | 34.0  | 0.0  | 39.0 | 84.0 | 23.0 |
| Total Split (%)         | 81.1% | 81.1% | 18.9% | 0.0% | 22%  | 47%  | 13%  |
| Maximum Green (s)       |       |       | 27.5  |      | 32.5 | 77.5 | 16.0 |
| Yellow Time (s)         |       |       | 4.0   |      | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        |       |       | 2.5   |      | 2.5  | 2.5  | 3.0  |
| Lead/Lag                |       |       | Lead  |      | Lead | Lag  | Lag  |
| Lead-Lag Optimize?      |       |       |       |      |      |      |      |
| Vehicle Extension (s)   |       |       | 3.0   |      | 5.0  | 3.0  | 3.0  |
| Minimum Gap (s)         |       |       | 3.0   |      | 5.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  |       |       | 0.0   |      | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      |       |       | 0.0   |      | 0.0  | 0.0  | 0.0  |
| Recall Mode             |       |       | Min   |      | Min  | Min  | Min  |
| Walk Time (s)           |       |       |       |      |      |      |      |
| Flash Dont Walk (s)     |       |       |       |      |      |      |      |
| Pedestrian Calls (#/hr) |       |       |       |      |      |      |      |
| 90th %ile Green (s)     |       |       | 27.5  |      | 32.5 | 77.5 | 16.0 |
| 90th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |
| 70th %ile Green (s)     |       |       | 27.5  |      | 32.5 | 77.5 | 16.0 |
| 70th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |
| 50th %ile Green (s)     |       |       | 27.5  |      | 32.5 | 77.5 | 16.0 |
| 50th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |
| 30th %ile Green (s)     |       |       | 27.5  |      | 32.5 | 77.5 | 16.0 |
| 30th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |
| 10th %ile Green (s)     |       |       | 27.5  |      | 32.5 | 77.5 | 16.0 |
| 10th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |

Intersection Summary

|                                      |
|--------------------------------------|
| Cycle Length: 180                    |
| Actuated Cycle Length: 180           |
| Control Type: Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: 180        |
| 70th %ile Actuated Cycle: 180        |
| 50th %ile Actuated Cycle: 180        |
| 30th %ile Actuated Cycle: 180        |
| 10th %ile Actuated Cycle: 180        |

Updated 2035 Baseline with Recommended Improvements  
 193: I-395 NB Off-Ramp/I-395 NB On-Ramp & Seminary Rd (N)

PM PEAK  
 10/22/2011



| Lane Group          | EBL  | EBT  | EBR  | WBL  | WBT  | WBR   | NBL   | NBT   | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|-------|-------|-------|------|------|------|------|
| Lane Configurations |      |      |      |      | ↑↑   | ↑↑    | ↑↑    | ↑↑    |      |      |      |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900  | 1900  | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12   | 12   | 12   | 12    | 12    | 12    | 12   | 12   | 12   | 12   |
| Grade (%)           |      | 0%   |      |      | 0%   |       |       | 0%    |      |      | 0%   |      |
| Storage Length (ft) | 0    |      | 0    | 0    |      | 125   | 0     |       | 0    | 0    |      | 0    |
| Storage Lanes       | 0    |      | 0    | 0    |      | 1     | 1     |       | 0    | 0    |      | 0    |
| Taper Length (ft)   | 50   |      |      | 50   |      |       | 50    |       |      | 50   |      |      |
| Lane Util. Factor   | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00  | 0.91  | 0.91  | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      |      |      |      |       |       |       |      |      |      |      |
| Frt                 |      |      |      |      |      | 0.850 |       |       |      |      |      |      |
| Flt Protected       |      |      |      |      |      |       | 0.950 | 0.992 |      |      |      |      |
| Satd. Flow (prot)   | 0    | 0    | 0    | 0    | 3539 | 1583  | 1610  | 3363  | 0    | 0    | 0    | 0    |
| Flt Permitted       |      |      |      |      |      |       | 0.950 | 0.992 |      |      |      |      |
| Satd. Flow (perm)   | 0    | 0    | 0    | 0    | 3539 | 1583  | 1610  | 3363  | 0    | 0    | 0    | 0    |
| Right Turn on Red   |      |      | Yes  |      |      | Yes   | Yes   |       | Yes  |      |      | Yes  |
| Satd. Flow (RTOR)   |      |      |      |      |      |       | 239   | 15    | 15   |      |      |      |
| Link Speed (mph)    |      | 35   |      |      | 35   |       |       | 35    |      |      |      | 35   |
| Link Distance (ft)  |      | 135  |      |      | 238  |       |       | 294   |      |      |      | 1353 |
| Travel Time (s)     |      | 2.6  |      |      | 4.6  |       |       | 5.7   |      |      |      | 26.4 |

Intersection Summary

|            |       |
|------------|-------|
| Area Type: | Other |
|------------|-------|

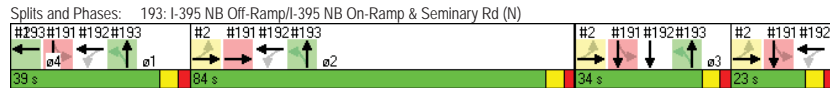
Updated 2035 Baseline with Recommended Improvements  
 193: I-395 NB Off-Ramp/I-395 NB On-Ramp & Seminary Rd (N)

PM PEAK  
 10/22/2011

| Lane Group           | WBT   | WBR   | NBL   | NBT   | ø1   | ø2   | ø3   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  | ↑↑    | ↑     | ↑     | ↑↑    |      |      |      |
| Volume (vph)         | 310   | 325   | 735   | 960   |      |      |      |
| Turn Type            | NA    | Free  | Perm  | NA    |      |      |      |
| Protected Phases     | 4     |       | 1 2 3 | 1 2 3 | 1    | 2    | 3    |
| Permitted Phases     |       | Free  | 1 2 3 |       |      |      |      |
| Detector Phase       | 4     |       | 1 2 3 | 1 2 3 |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  | 10.0  |       |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    | 23.0  |       |       |       | 22.5 | 22.5 | 22.5 |
| Total Split (s)      | 23.0  | 0.0   | 157.0 | 157.0 | 39.0 | 84.0 | 34.0 |
| Total Split (%)      | 12.8% | 0.0%  | 87.2% | 87.2% | 22%  | 47%  | 19%  |
| Yellow Time (s)      | 4.0   |       |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     | 3.0   |       |       |       | 2.5  | 2.5  | 2.5  |
| Lost Time Adjust (s) | -3.0  | 0.0   | -2.5  | -2.5  |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             | Lag   |       |       |       | Lead | Lag  | Lead |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          | Min   |       |       |       | Min  | Min  | Min  |
| Act Effct Green (s)  | 19.0  | 180.0 | 153.0 | 153.0 |      |      |      |
| Actuated g/C Ratio   | 0.11  | 1.00  | 0.85  | 0.85  |      |      |      |
| v/c Ratio            | 0.89  | 0.22  | 0.43  | 0.43  |      |      |      |
| Control Delay        | 104.3 | 0.3   | 16.8  | 4.4   |      |      |      |
| Queue Delay          | 4.8   | 0.0   | 285.4 | 0.1   |      |      |      |
| Total Delay          | 109.2 | 0.3   | 302.1 | 4.6   |      |      |      |
| LOS                  | F     | A     | F     | A     |      |      |      |
| Approach Delay       | 53.5  |       |       | 101.3 |      |      |      |
| Approach LOS         | D     |       |       | F     |      |      |      |

Intersection Summary

Cycle Length: 180  
 Actuated Cycle Length: 180  
 Natural Cycle: 145  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.18  
 Intersection Signal Delay: 88.2  
 Intersection LOS: F  
 Intersection Capacity Utilization 55.1%  
 ICU Level of Service B  
 Analysis Period (min) 15



Updated 2035 Baseline with Recommended Improvements  
 193: I-395 NB Off-Ramp/I-395 NB On-Ramp & Seminary Rd (N)

PM PEAK  
 10/22/2011

| Lane Group              | WBT   | WBR  | NBL   | NBT   | ø1   | ø2   | ø3   |
|-------------------------|-------|------|-------|-------|------|------|------|
| Protected Phases        | 4     |      |       | 1 2 3 | 1    | 2    | 3    |
| Permitted Phases        |       | Free | 1 2 3 |       |      |      |      |
| Minimum Initial (s)     | 10.0  |      |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       | 23.0  |      |       |       | 22.5 | 22.5 | 22.5 |
| Total Split (s)         | 23.0  | 0.0  | 157.0 | 157.0 | 39.0 | 84.0 | 34.0 |
| Total Split (%)         | 12.8% | 0.0% | 87.2% | 87.2% | 22%  | 47%  | 19%  |
| Maximum Green (s)       | 16.0  |      |       |       | 32.5 | 77.5 | 27.5 |
| Yellow Time (s)         | 4.0   |      |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        | 3.0   |      |       |       | 2.5  | 2.5  | 2.5  |
| Lead/Lag                | Lag   |      |       |       | Lead | Lag  | Lead |
| Lead-Lag Optimize?      |       |      |       |       |      |      |      |
| Vehicle Extension (s)   | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Minimum Gap (s)         | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Recall Mode             | Min   |      |       |       | Min  | Min  | Min  |
| Walk Time (s)           |       |      |       |       |      |      |      |
| Flash Dont Walk (s)     |       |      |       |       |      |      |      |
| Pedestrian Calls (#/hr) |       |      |       |       |      |      |      |
| 90th %ile Green (s)     | 16.0  |      |       |       | 32.5 | 77.5 | 27.5 |
| 90th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 70th %ile Green (s)     | 16.0  |      |       |       | 32.5 | 77.5 | 27.5 |
| 70th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 50th %ile Green (s)     | 16.0  |      |       |       | 32.5 | 77.5 | 27.5 |
| 50th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 30th %ile Green (s)     | 16.0  |      |       |       | 32.5 | 77.5 | 27.5 |
| 30th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 10th %ile Green (s)     | 16.0  |      |       |       | 32.5 | 77.5 | 27.5 |
| 10th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |

Intersection Summary

Cycle Length: 180  
 Actuated Cycle Length: 180  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 180  
 70th %ile Actuated Cycle: 180  
 50th %ile Actuated Cycle: 180  
 30th %ile Actuated Cycle: 180  
 10th %ile Actuated Cycle: 180

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**E Appendix E: Year 2035 Market Demand Lanes, Timings & Phasing (Synchro)**

The following pages are analysis reports generated by Synchro.





Lanes and Geometrics  
 1: N Pickett St/N Pickett St/Fire Station & Seminary Rd  
 AM PEAK

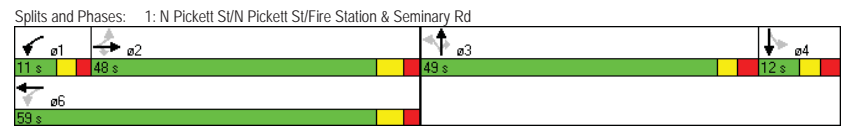
| Lane Group          | EBL  | EBT   | EBR  | WBL  | WBT   | WBR  | NBL  | NBT  | NBR   | SBL  | SBT  | SBR  |
|---------------------|------|-------|------|------|-------|------|------|------|-------|------|------|------|
| Lane Configurations |      | ↕↕    | ↕    |      | ↕↕    |      |      | ↕    | ↕     |      | ↕↕   |      |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           |      | 0%    |      |      | 0%    |      |      | 0%   |       |      | 0%   |      |
| Storage Length (ft) | 0    |       | 0    | 0    |       | 0    | 0    |      | 50    | 0    |      | 0    |
| Storage Lanes       | 0    |       | 1    | 0    |       | 0    | 0    |      | 1     | 0    |      | 0    |
| Taper Length (ft)   | 50   |       |      | 50   |       |      | 50   |      |       | 50   |      |      |
| Lane Util. Factor   | 0.95 | 0.95  | 1.00 | 0.95 | 0.95  | 0.95 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor     |      |       |      |      |       |      |      |      | 0.98  |      |      |      |
| Frt                 |      | 0.850 |      |      |       |      |      |      | 0.850 |      |      |      |
| Flt Protected       |      |       |      |      | 0.996 |      |      |      | 0.950 |      |      |      |
| Satd. Flow (prot)   | 0    | 3539  | 1583 | 0    | 3525  | 0    | 0    | 1770 | 1583  | 0    | 1863 | 0    |
| Flt Permitted       |      |       |      |      | 0.595 |      |      |      | 0.950 |      |      |      |
| Satd. Flow (perm)   | 0    | 3539  | 1583 | 0    | 2106  | 0    | 0    | 1770 | 1555  | 0    | 1863 | 0    |
| Right Turn on Red   |      |       | Yes  |      |       | Yes  |      |      | Yes   |      |      | Yes  |
| Satd. Flow (RTOR)   |      |       | 118  |      |       |      |      |      | 118   |      |      |      |
| Link Speed (mph)    |      | 35    |      |      | 35    |      |      |      | 25    |      |      | 25   |
| Link Distance (ft)  |      | 317   |      |      | 744   |      |      |      | 657   |      |      | 269  |
| Travel Time (s)     |      | 6.2   |      |      | 14.5  |      |      |      | 17.9  |      |      | 7.3  |

Intersection Summary  
 Area Type: Other

Timings  
 1: N Pickett St/N Pickett St/Fire Station & Seminary Rd  
 AM PEAK

| Lane Group           | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | ø4   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations  | ↕↕    | ↕     |       | ↕↕    |       | ↕     | ↕     |      |
| Volume (vph)         | 850   | 110   | 80    | 865   | 125   | 0     | 110   |      |
| Turn Type            | NA    | Perm  | pm+pt | NA    | Perm  | NA    | Perm  |      |
| Protected Phases     | 2     |       | 1     | 6     |       | 3     |       | 4    |
| Permitted Phases     |       | 2     | 6     |       | 3     |       | 3     |      |
| Detector Phase       | 2     | 2     | 1     | 6     | 3     | 3     | 3     |      |
| Switch Phase         |       |       |       |       |       |       |       |      |
| Minimum Initial (s)  | 10.0  | 10.0  | 5.0   | 10.0  | 7.0   | 7.0   | 7.0   | 5.0  |
| Minimum Split (s)    | 46.5  | 46.5  | 10.0  | 16.5  | 31.0  | 31.0  | 31.0  | 11.0 |
| Total Split (s)      | 48.0  | 48.0  | 11.0  | 59.0  | 49.0  | 49.0  | 49.0  | 12.0 |
| Total Split (%)      | 40.0% | 40.0% | 9.2%  | 49.2% | 40.8% | 40.8% | 40.8% | 10%  |
| Yellow Time (s)      | 4.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| All-Red Time (s)     | 2.5   | 2.5   | 2.0   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0  |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Total Lost Time (s)  | 6.5   | 6.5   | 5.0   | 6.5   | 6.0   | 6.0   | 6.0   | 6.0  |
| Lead/Lag             | Lag   | Lag   | Lead  |       | Lead  | Lead  | Lead  | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |      |
| Recall Mode          | C-Max | C-Max | Max   | C-Max | None  | None  | None  | None |
| Act Effct Green (s)  | 41.5  | 41.5  |       | 64.5  |       | 43.0  |       | 43.0 |
| Actuated g/C Ratio   | 0.35  | 0.35  |       | 0.54  |       | 0.36  |       | 0.36 |
| v/c Ratio            | 0.75  | 0.19  |       | 0.77  |       | 0.21  |       | 0.19 |
| Control Delay        | 37.8  | 6.1   |       | 23.9  |       | 27.9  |       | 5.3  |
| Queue Delay          | 7.4   | 0.0   |       | 0.0   |       | 0.0   |       | 0.0  |
| Total Delay          | 45.2  | 6.1   |       | 23.9  |       | 27.9  |       | 5.3  |
| LOS                  | D     | A     |       | C     |       | C     |       | A    |
| Approach Delay       | 40.8  |       |       | 23.9  |       | 17.3  |       |      |
| Approach LOS         | D     |       |       | C     |       | B     |       |      |

Intersection Summary  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 110 (92%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 30.7  
 Intersection LOS: C  
 Intersection Capacity Utilization 74.2%  
 ICU Level of Service D  
 Analysis Period (min) 15



Phasings

2035 Market with Traffic Mitigation

1: N Pickett St/N Pickett St/Fire Station & Seminary Rd

AM PEAK

|                         | →     | ↘     | ↙    | ←     | ↖     | ↗     | ↘     | ↙    |
|-------------------------|-------|-------|------|-------|-------|-------|-------|------|
| Lane Group              | EBT   | EBR   | WBL  | WBT   | NBL   | NBT   | NBR   | ø4   |
| Protected Phases        | 2     |       | 1    | 6     |       | 3     |       | 4    |
| Permitted Phases        |       | 2     | 6    |       | 3     |       | 3     |      |
| Minimum Initial (s)     | 10.0  | 10.0  | 5.0  | 10.0  | 7.0   | 7.0   | 7.0   | 5.0  |
| Minimum Split (s)       | 46.5  | 46.5  | 10.0 | 16.5  | 31.0  | 31.0  | 31.0  | 11.0 |
| Total Split (s)         | 48.0  | 48.0  | 11.0 | 59.0  | 49.0  | 49.0  | 49.0  | 12.0 |
| Total Split (%)         | 40.0% | 40.0% | 9.2% | 49.2% | 40.8% | 40.8% | 40.8% | 10%  |
| Maximum Green (s)       | 41.5  | 41.5  | 6.0  | 52.5  | 43.0  | 43.0  | 43.0  | 6.0  |
| Yellow Time (s)         | 4.0   | 4.0   | 3.0  | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| All-Red Time (s)        | 2.5   | 2.5   | 2.0  | 2.5   | 3.0   | 3.0   | 3.0   | 3.0  |
| Lead/Lag                | Lag   | Lag   | Lead |       | Lead  | Lead  | Lead  | Lag  |
| Lead-Lag Optimize?      |       |       |      |       |       |       |       |      |
| Vehicle Extension (s)   | 4.0   | 4.0   | 4.0  | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| Minimum Gap (s)         | 4.0   | 4.0   | 4.0  | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Recall Mode             | C-Max | C-Max | Max  | C-Max | None  | None  | None  | None |
| Walk Time (s)           | 22.0  | 22.0  |      |       | 7.0   | 7.0   | 7.0   |      |
| Flash Dont Walk (s)     | 18.0  | 18.0  |      |       | 18.0  | 18.0  | 18.0  |      |
| Pedestrian Calls (#/hr) | 0     | 0     |      |       | 0     | 0     | 0     |      |
| 90th %ile Green (s)     | 41.5  | 41.5  | 18.0 | 64.5  | 43.0  | 43.0  | 43.0  | 0.0  |
| 90th %ile Term Code     | Coord | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |
| 70th %ile Green (s)     | 41.5  | 41.5  | 18.0 | 64.5  | 43.0  | 43.0  | 43.0  | 0.0  |
| 70th %ile Term Code     | Coord | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |
| 50th %ile Green (s)     | 41.5  | 41.5  | 18.0 | 64.5  | 43.0  | 43.0  | 43.0  | 0.0  |
| 50th %ile Term Code     | Coord | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |
| 30th %ile Green (s)     | 41.5  | 41.5  | 18.0 | 64.5  | 43.0  | 43.0  | 43.0  | 0.0  |
| 30th %ile Term Code     | Coord | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |
| 10th %ile Green (s)     | 41.5  | 41.5  | 18.0 | 64.5  | 43.0  | 43.0  | 43.0  | 0.0  |
| 10th %ile Term Code     | Coord | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 110 (92%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

2035 Market with Traffic Mitigation

2: I-395 NB Off-Ramp & Seminary Rd (S)

AM PEAK

|                     | ↖     | →     | ↘    | ↙    | ←    | ↖    | ↗    | ↘    | ↙     | ↖    | ↗    | ↘    | ↙    |
|---------------------|-------|-------|------|------|------|------|------|------|-------|------|------|------|------|
| Lane Group          | EBL   | EBT   | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR   | SBL  | SBT  | SBR  |      |
| Lane Configurations | ↖ ↗   | ↖ ↗   |      |      |      |      |      | ↖ ↗  | ↖ ↗   |      |      |      |      |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12    | 12   | 12   | 12   | 12   |
| Grade (%)           |       | 0%    |      |      | 0%   |      |      | 0%   |       |      | 0%   |      |      |
| Storage Length (ft) | 0     |       | 0    | 0    |      | 0    | 0    |      | 600   | 0    |      | 0    | 0    |
| Storage Lanes       | 1     |       | 0    | 0    |      | 0    | 0    |      | 1     | 0    |      | 0    | 0    |
| Taper Length (ft)   | 50    |       |      | 50   |      |      | 50   |      | 50    |      |      | 50   |      |
| Lane Util. Factor   | 0.91  | 0.91  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor     |       |       |      |      |      |      |      |      | 0.850 |      |      |      |      |
| Flt Protected       | 0.950 | 0.969 |      |      |      |      |      |      | 3539  | 1583 | 0    | 0    | 0    |
| Satd. Flow (prot)   | 1610  | 3285  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583  | 0    | 0    | 0    | 0    |
| Flt Permitted       | 0.950 | 0.969 |      |      |      |      |      |      |       |      |      |      |      |
| Satd. Flow (perm)   | 1610  | 3285  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583  | 0    | 0    | 0    | 0    |
| Right Turn on Red   | Yes   |       | Yes  |      |      | Yes  |      |      | Yes   |      |      |      | Yes  |
| Satd. Flow (RTOR)   | 188   | 188   |      |      |      |      |      |      | 108   |      |      |      |      |
| Link Speed (mph)    |       | 35    |      |      | 35   |      |      |      | 35    |      |      | 35   |      |
| Link Distance (ft)  |       | 307   |      |      | 322  |      |      |      | 1292  |      |      | 272  |      |
| Travel Time (s)     |       | 6.0   |      |      | 6.3  |      |      |      | 25.2  |      |      | 5.3  |      |

Intersection Summary

Area Type: Other

Timings

2035 Market with Traffic Mitigation  
AM PEAK

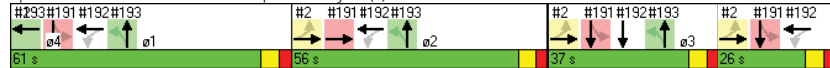
2: I-395 NB Off-Ramp & Seminary Rd (S)

| Lane Group           | EBL   | EBT   | NBT   | NBR   | ø2   | ø3   | ø4   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  |       |       |       |       |      |      |      |
| Volume (vph)         | 825   | 235   | 395   | 100   |      |      |      |
| Turn Type            | Perm  | NA    | NA    | Perm  |      |      |      |
| Protected Phases     |       | 2 3 4 | 1     |       | 2    | 3    | 4    |
| Permitted Phases     | 2 3 4 |       |       | 1     |      |      |      |
| Detector Phase       | 2 3 4 | 2 3 4 | 1     | 1     |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  |       |       | 10.0  | 10.0  | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    |       |       | 22.5  | 22.5  | 22.5 | 22.5 | 23.0 |
| Total Split (s)      | 119.0 | 119.0 | 61.0  | 61.0  | 56.0 | 37.0 | 26.0 |
| Total Split (%)      | 66.1% | 66.1% | 33.9% | 33.9% | 31%  | 21%  | 14%  |
| Yellow Time (s)      |       |       | 4.0   | 4.0   | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     |       |       | 2.5   | 2.5   | 2.5  | 2.5  | 3.0  |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | -2.5  |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             |       |       | Lead  | Lead  | Lag  | Lead | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          |       |       | Min   | Min   | Min  | Min  | Min  |
| Act Effct Green (s)  | 115.0 | 115.0 | 57.0  | 57.0  |      |      |      |
| Actuated g/C Ratio   | 0.64  | 0.64  | 0.32  | 0.32  |      |      |      |
| v/c Ratio            | 0.40  | 0.32  | 0.38  | 0.19  |      |      |      |
| Control Delay        | 1.7   | 4.4   | 49.0  | 7.5   |      |      |      |
| Queue Delay          | 8.3   | 1.0   | 0.0   | 0.0   |      |      |      |
| Total Delay          | 10.1  | 5.4   | 49.0  | 7.5   |      |      |      |
| LOS                  | B     | A     | D     | A     |      |      |      |
| Approach Delay       |       | 7.2   | 40.6  |       |      |      |      |
| Approach LOS         |       | A     | D     |       |      |      |      |

Intersection Summary

|   |                        |
|---|------------------------|
| Cycle Length: 180                       |                        |
| Actuated Cycle Length: 180              |                        |
| Natural Cycle: 105                      |                        |
| Control Type: Actuated-Uncoordinated    |                        |
| Maximum v/c Ratio: 1.25                 |                        |
| Intersection Signal Delay: 17.8         | Intersection LOS: B    |
| Intersection Capacity Utilization 46.4% | ICU Level of Service A |
| Analysis Period (min) 15                |                        |

Splits and Phases: 2: I-395 NB Off-Ramp & Seminary Rd (S)



Phasings

2035 Market with Traffic Mitigation  
AM PEAK

2: I-395 NB Off-Ramp & Seminary Rd (S)

| Lane Group              | EBL   | EBT   | NBT   | NBR   | ø2   | ø3   | ø4   |
|-------------------------|-------|-------|-------|-------|------|------|------|
| Protected Phases        |       | 2 3 4 | 1     |       | 2    | 3    | 4    |
| Permitted Phases        | 2 3 4 |       |       | 1     |      |      |      |
| Minimum Initial (s)     |       |       | 10.0  | 10.0  | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       |       |       | 22.5  | 22.5  | 22.5 | 22.5 | 23.0 |
| Total Split (s)         | 119.0 | 119.0 | 61.0  | 61.0  | 56.0 | 37.0 | 26.0 |
| Total Split (%)         | 66.1% | 66.1% | 33.9% | 33.9% | 31%  | 21%  | 14%  |
| Maximum Green (s)       |       |       | 54.5  | 54.5  | 49.5 | 30.5 | 19.0 |
| Yellow Time (s)         |       |       | 4.0   | 4.0   | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        |       |       | 2.5   | 2.5   | 2.5  | 2.5  | 3.0  |
| Lead/Lag                |       |       | Lead  | Lead  | Lag  | Lead | Lag  |
| Lead-Lag Optimize?      |       |       |       |       |      |      |      |
| Vehicle Extension (s)   |       |       | 5.0   | 5.0   | 3.0  | 3.0  | 3.0  |
| Minimum Gap (s)         |       |       | 5.0   | 5.0   | 3.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  |       |       | 0.0   | 0.0   | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      |       |       | 0.0   | 0.0   | 0.0  | 0.0  | 0.0  |
| Recall Mode             |       |       | Min   | Min   | Min  | Min  | Min  |
| Walk Time (s)           |       |       |       |       |      |      |      |
| Flash Dont Walk (s)     |       |       |       |       |      |      |      |
| Pedestrian Calls (#/hr) |       |       |       |       |      |      |      |
| 90th %ile Green (s)     |       |       | 54.5  | 54.5  | 49.5 | 30.5 | 19.0 |
| 90th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 70th %ile Green (s)     |       |       | 54.5  | 54.5  | 49.5 | 30.5 | 19.0 |
| 70th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 50th %ile Green (s)     |       |       | 54.5  | 54.5  | 49.5 | 30.5 | 19.0 |
| 50th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 30th %ile Green (s)     |       |       | 54.5  | 54.5  | 49.5 | 30.5 | 19.0 |
| 30th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 10th %ile Green (s)     |       |       | 54.5  | 54.5  | 49.5 | 30.5 | 19.0 |
| 10th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |

Intersection Summary

|                                      |
|--------------------------------------|
| Cycle Length: 180                    |
| Actuated Cycle Length: 180           |
| Control Type: Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: 180        |
| 70th %ile Actuated Cycle: 180        |
| 50th %ile Actuated Cycle: 180        |
| 30th %ile Actuated Cycle: 180        |
| 10th %ile Actuated Cycle: 180        |

Lanes and Geometrics  
3: Seminary Rd (S)/Seminary Rd (N) & Seminary Rd

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL  | EBT  | EBR   | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR   |
|---------------------|------|------|-------|------|------|------|------|------|------|------|------|-------|
| Lane Configurations |      | ↑↑   | ↑↑    |      | ↑↑   |      |      |      |      |      |      | ↑↑    |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12   | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12    |
| Grade (%)           |      | 0%   |       |      | 0%   |      |      | 0%   |      |      | 0%   |       |
| Storage Length (ft) | 0    |      | 0     | 0    |      | 0    | 0    |      | 0    | 0    |      | 0     |
| Storage Lanes       | 0    |      | 2     | 0    |      | 0    | 0    |      | 0    | 0    |      | 2     |
| Taper Length (ft)   | 50   |      |       | 50   |      |      | 50   |      |      | 50   |      |       |
| Lane Util. Factor   | 1.00 | 0.95 | 0.88  | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88  |
| Ped Bike Factor     |      |      |       |      |      |      |      |      |      |      |      |       |
| Frt                 |      |      | 0.850 |      |      |      |      |      |      |      |      | 0.850 |
| Flt Protected       |      |      |       |      |      |      |      |      |      |      |      |       |
| Satd. Flow (prot)   | 0    | 3539 | 2787  | 0    | 3539 | 0    | 0    | 0    | 0    | 0    | 0    | 2787  |
| Flt Permitted       |      |      |       |      |      |      |      |      |      |      |      |       |
| Satd. Flow (perm)   | 0    | 3539 | 2787  | 0    | 3539 | 0    | 0    | 0    | 0    | 0    | 0    | 2787  |
| Link Speed (mph)    |      | 35   |       |      | 35   |      |      | 35   |      |      |      | 35    |
| Link Distance (ft)  |      | 387  |       |      | 818  |      |      | 331  |      |      |      | 287   |
| Travel Time (s)     |      | 7.5  |       |      | 15.9 |      |      | 6.4  |      |      |      | 5.6   |

**Intersection Summary**  
Area Type: Other

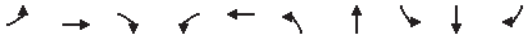
Lanes and Geometrics  
7: Beauregard St/S Walter Reed Dr & King St

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT  | SBR   |
|---------------------|-------|------|-------|-------|-------|------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↑↑    | ↑↑   | ↑     | ↑↑    | ↑↑    | ↑↑   |       |       |      |       | ↑↑   | ↑↑    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12   | 12    |
| Grade (%)           |       | 0%   |       |       | 0%    |      |       | 0%    |      |       | 0%   |       |
| Storage Length (ft) | 230   |      | 100   | 225   |       | 0    | 400   |       | 0    | 160   |      | 140   |
| Storage Lanes       | 2     |      | 1     | 2     |       | 0    | 2     |       | 0    | 1     |      | 1     |
| Taper Length (ft)   | 140   |      |       | 140   |       |      | 50    |       |      | 50    |      |       |
| Lane Util. Factor   | 0.97  | 0.95 | 1.00  | 0.97  | 0.95  | 0.95 | 0.97  | 0.95  | 0.95 | 1.00  | 0.95 | 1.00  |
| Ped Bike Factor     |       |      | 0.97  |       | 1.00  |      |       | 1.00  |      |       |      | 0.98  |
| Frt                 |       |      | 0.850 |       | 0.992 |      |       | 0.982 |      |       |      | 0.850 |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (prot)   | 3433  | 3539 | 1583  | 3433  | 3507  | 0    | 3433  | 3465  | 0    | 1770  | 3539 | 1583  |
| Flt Permitted       | 0.950 |      |       | 0.950 |       |      | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (perm)   | 3433  | 3539 | 1541  | 3433  | 3507  | 0    | 3433  | 3465  | 0    | 1770  | 3539 | 1556  |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |       |       | Yes  |       |      | Yes   |
| Satd. Flow (RTOR)   |       |      | 47    |       | 6     |      |       |       | 11   |       |      | 61    |
| Link Speed (mph)    |       | 35   |       |       | 35    |      |       |       | 35   |       |      | 35    |
| Link Distance (ft)  |       | 1357 |       |       | 1477  |      |       |       | 1439 |       |      | 1148  |
| Travel Time (s)     |       | 26.4 |       |       | 28.8  |      |       |       | 28.0 |       |      | 22.4  |

**Intersection Summary**  
Area Type: Other

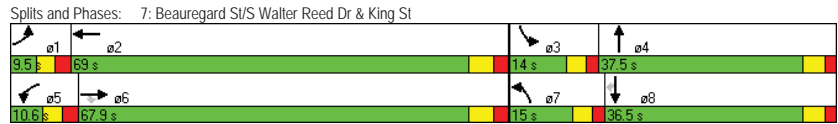
**Timings** 2035 Market with Traffic Mitigation  
**7: Beaugard St/S Walter Reed Dr & King St** AM PEAK



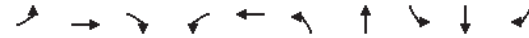
| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖↗    | ↖↗    | ↖     | ↖↗    | ↖↗    | ↖↗    | ↖↗    | ↖↗    | ↖↗    | ↖↗    |
| Volume (vph)         | 100   | 1705  | 160   | 145   | 2585  | 320   | 865   | 195   | 305   | 250   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Prot  | NA    | Prot  | NA    | Perm  |
| Protected Phases     | 1     | 6     |       | 5     | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases     |       |       | 6     |       |       |       |       |       |       | 8     |
| Detector Phase       | 1     | 6     | 6     | 5     | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 10.0  | 10.0  | 4.0   | 10.0  | 6.5   | 7.0   | 3.5   | 7.0   | 7.0   |
| Minimum Split (s)    | 9.5   | 27.5  | 27.5  | 9.5   | 27.5  | 12.0  | 26.5  | 9.0   | 26.5  | 26.5  |
| Total Split (s)      | 9.5   | 67.9  | 67.9  | 10.6  | 69.0  | 15.0  | 37.5  | 14.0  | 36.5  | 36.5  |
| Total Split (%)      | 7.3%  | 52.2% | 52.2% | 8.2%  | 53.1% | 11.5% | 28.8% | 10.8% | 28.1% | 28.1% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.5   | 3.0   | 3.5   | 3.5   |
| All-Red Time (s)     | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -5.0  | -5.0  | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.5   | 6.5   | 6.5   | 5.5   | 6.5   | 0.0   | 0.5   | 5.0   | 5.5   | 5.5   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | Min   | Min   | None  | Min   | None  | C-Min | None  | C-Min | C-Min |
| Act Effct Green (s)  | 4.0   | 61.4  | 61.4  | 5.1   | 62.5  | 15.0  | 37.0  | 9.0   | 31.0  | 31.0  |
| Actuated g/c Ratio   | 0.03  | 0.47  | 0.47  | 0.04  | 0.48  | 0.12  | 0.28  | 0.07  | 0.24  | 0.24  |
| v/c Ratio            | 1.02  | 1.10  | 0.23  | 1.16  | 1.74  | 0.87  | 1.06  | 1.71  | 0.39  | 0.64  |
| Control Delay        | 153.7 | 86.9  | 15.4  | 178.7 | 360.5 | 71.4  | 89.8  | 385.7 | 43.2  | 42.1  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 153.7 | 86.9  | 15.4  | 178.7 | 360.5 | 71.4  | 89.8  | 385.7 | 43.2  | 42.1  |
| LOS                  | F     | F     | B     | F     | F     | E     | F     | F     | D     | D     |
| Approach Delay       |       | 84.5  |       |       | 351.3 |       | 85.3  |       | 132.0 |       |
| Approach LOS         |       | F     |       |       | F     |       | F     |       | F     |       |

**Intersection Summary**

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 10 (8%), Referenced to phase 4:NBT and 8:SBT, Start of Yellow  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.74  
 Intersection Signal Delay: 201.2                      Intersection LOS: F  
 Intersection Capacity Utilization 127.5%                      ICU Level of Service H  
 Analysis Period (min) 15



**Phasings** 2035 Market with Traffic Mitigation  
**7: Beaugard St/S Walter Reed Dr & King St** AM PEAK



| Lane Group             | EBL  | EBT   | EBR   | WBL  | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| Protected Phases       | 1    | 6     |       | 5    | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases       |      |       | 6     |      |       |       |       |       |       | 8     |
| Minimum Initial (s)    | 4.0  | 10.0  | 10.0  | 4.0  | 10.0  | 6.5   | 7.0   | 3.5   | 7.0   | 7.0   |
| Minimum Split (s)      | 9.5  | 27.5  | 27.5  | 9.5  | 27.5  | 12.0  | 26.5  | 9.0   | 26.5  | 26.5  |
| Total Split (s)        | 9.5  | 67.9  | 67.9  | 10.6 | 69.0  | 15.0  | 37.5  | 14.0  | 36.5  | 36.5  |
| Total Split (%)        | 7.3% | 52.2% | 52.2% | 8.2% | 53.1% | 11.5% | 28.8% | 10.8% | 28.1% | 28.1% |
| Maximum Green (s)      | 4.0  | 61.4  | 61.4  | 5.1  | 62.5  | 10.0  | 32.0  | 9.0   | 31.0  | 31.0  |
| Yellow Time (s)        | 3.0  | 4.0   | 4.0   | 3.0  | 4.0   | 3.0   | 3.5   | 3.0   | 3.5   | 3.5   |
| All-Red Time (s)       | 2.5  | 2.5   | 2.5   | 2.5  | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag               | Lead | Lag   | Lag   | Lead | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?     |      |       |       |      |       |       |       |       |       |       |
| Vehicle Extension (s)  | 3.0  | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)        | 3.0  | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s) | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)     | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode            | None | Min   | Min   | None | Min   | None  | C-Min | None  | C-Min | C-Min |
| Walk Time (s)          | 7.0  | 7.0   | 7.0   | 7.0  | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)    | 14.0 | 14.0  | 14.0  | 14.0 | 14.0  | 14.0  | 14.0  | 14.0  | 14.0  | 14.0  |
| Pedestrian Calls (/hr) | 0    | 0     | 0     | 0    | 0     | 0     | 0     | 0     | 0     | 0     |
| 90th %ile Green (s)    | 4.0  | 61.4  | 61.4  | 5.1  | 62.5  | 10.0  | 32.0  | 9.0   | 31.0  | 31.0  |
| 90th %ile Term Code    | Max  | Max   | Max   | Max  | Max   | Max   | Coord | Max   | Coord | Coord |
| 70th %ile Green (s)    | 4.0  | 61.4  | 61.4  | 5.1  | 62.5  | 10.0  | 32.0  | 9.0   | 31.0  | 31.0  |
| 70th %ile Term Code    | Max  | Max   | Max   | Max  | Max   | Max   | Coord | Max   | Coord | Coord |
| 50th %ile Green (s)    | 4.0  | 61.4  | 61.4  | 5.1  | 62.5  | 10.0  | 32.0  | 9.0   | 31.0  | 31.0  |
| 50th %ile Term Code    | Max  | Max   | Max   | Max  | Max   | Max   | Coord | Max   | Coord | Coord |
| 30th %ile Green (s)    | 4.0  | 61.4  | 61.4  | 5.1  | 62.5  | 10.0  | 32.0  | 9.0   | 31.0  | 31.0  |
| 30th %ile Term Code    | Max  | Max   | Max   | Max  | Max   | Max   | Coord | Max   | Coord | Coord |
| 10th %ile Green (s)    | 4.0  | 61.4  | 61.4  | 5.1  | 62.5  | 10.0  | 32.0  | 9.0   | 31.0  | 31.0  |
| 10th %ile Term Code    | Max  | Max   | Max   | Max  | Max   | Max   | Coord | Max   | Coord | Coord |

**Intersection Summary**

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 10 (8%), Referenced to phase 4:NBT and 8:SBT, Start of Yellow  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
9: Beauregard St & Braddock Rd

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT  | WBR   | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|-------|------|-------|------|-------|-------|------|-------|-------|-------|------|
| Lane Configurations | ↔     | ↕     | ↔    | ↔     | ↕    | ↕     | ↔     | ↕    | ↕     | ↔     | ↕     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           |       | -6%   |      |       | -4%  |       |       | -2%  |       |       | 2%    |      |
| Storage Length (ft) | 100   |       | 0    | 200   |      | 60    | 80    |      | 100   | 200   |       | 0    |
| Storage Lanes       | 1     |       | 0    | 1     |      | 1     | 1     |      | 1     | 1     |       | 0    |
| Taper Length (ft)   | 50    |       |      | 50    |      |       | 50    |      |       | 50    |       |      |
| Lane Util. Factor   | 1.00  | 0.95  | 0.95 | 1.00  | 0.95 | 1.00  | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 0.95 |
| Ped Bike Factor     |       |       |      |       |      |       |       |      |       |       | 0.99  |      |
| Frt                 |       | 0.913 |      |       |      | 0.850 |       |      | 0.850 |       | 0.975 |      |
| Flt Protected       | 0.950 |       |      | 0.950 |      |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (prot)   | 1823  | 3328  | 0    | 1805  | 3610 | 1615  | 1787  | 3575 | 1599  | 1752  | 3391  | 0    |
| Flt Permitted       | 0.698 |       |      | 0.662 |      |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (perm)   | 1339  | 3328  | 0    | 1258  | 3610 | 1615  | 1787  | 3575 | 1599  | 1752  | 3391  | 0    |
| Right Turn on Red   |       |       | Yes  |       |      | Yes   |       |      | Yes   |       |       | Yes  |
| Satd. Flow (RTOR)   |       | 22    |      |       |      | 163   |       |      | 112   |       | 26    |      |
| Link Speed (mph)    |       | 35    |      |       |      | 35    |       |      | 35    |       | 35    |      |
| Link Distance (ft)  |       | 755   |      |       | 1840 |       |       | 1125 |       |       | 1439  |      |
| Travel Time (s)     |       | 14.7  |      |       | 35.8 |       |       | 21.9 |       |       | 28.0  |      |

Intersection Summary

Area Type: Other

Timings  
9: Beauregard St & Braddock Rd

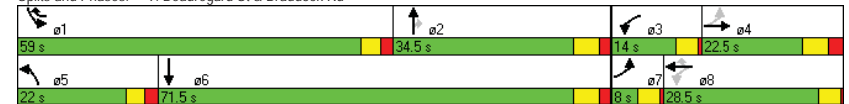
2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↕     | ↔     | ↕     | ↕     | ↔     | ↕     |
| Volume (vph)         | 5     | 15    | 190   | 80    | 755   | 130   | 540   | 180   | 340   | 225   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+ov | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 7     | 4     | 3     | 8     | 1     | 5     | 2     |       | 1     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 8     |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 3     | 8     | 1     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 7.0   | 4.0   | 4.0   | 6.0   | 6.0   | 10.0  | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)    | 8.0   | 22.5  | 8.0   | 20.0  | 11.0  | 11.0  | 26.0  | 26.0  | 11.0  | 26.0  |
| Total Split (s)      | 8.0   | 22.5  | 14.0  | 28.5  | 59.0  | 22.0  | 34.5  | 34.5  | 59.0  | 71.5  |
| Total Split (%)      | 6.2%  | 17.3% | 10.8% | 21.9% | 45.4% | 16.9% | 26.5% | 26.5% | 45.4% | 55.0% |
| Yellow Time (s)      | 3.5   | 4.0   | 3.5   | 3.5   | 3.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 0.5   | 2.5   | 0.5   | 0.5   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | -2.5  | 0.0   | -1.0  | -2.0  | 0.0   | -1.0  | -2.0  |
| Total Lost Time (s)  | 1.5   | 4.0   | 1.5   | 1.5   | 5.0   | 4.0   | 6.0   | 6.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |
| Act Effct Green (s)  | 17.9  | 11.3  | 25.1  | 23.5  | 67.5  | 15.5  | 51.9  | 49.9  | 43.5  | 79.9  |
| Actuated g/C Ratio   | 0.14  | 0.09  | 0.19  | 0.18  | 0.52  | 0.12  | 0.40  | 0.38  | 0.33  | 0.61  |
| v/c Ratio            | 0.02  | 0.12  | 0.69  | 0.13  | 0.89  | 0.66  | 0.41  | 0.28  | 0.62  | 0.14  |
| Control Delay        | 38.4  | 29.6  | 59.1  | 43.6  | 33.3  | 65.8  | 23.9  | 11.0  | 26.9  | 7.6   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 38.4  | 29.6  | 59.1  | 43.6  | 33.3  | 65.8  | 23.9  | 11.0  | 26.9  | 7.6   |
| LOS                  | D     | C     | E     | D     | C     | E     | C     | B     | C     | A     |
| Approach Delay       |       | 30.6  |       | 38.9  |       |       | 27.6  |       |       | 18.3  |
| Approach LOS         |       | C     |       | D     |       |       | C     |       |       | B     |

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 71 (55%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.89  
 Intersection Signal Delay: 30.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 75.8%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 9: Beauregard St & Braddock Rd



Phasings  
9: Beauregard St & Braddock Rd

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group              | EBL  | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 7    | 4     | 3     | 8     | 1     | 5     | 2     |       | 1     | 6     |
| Permitted Phases        | 4    |       | 8     |       | 8     |       |       | 2     |       |       |
| Minimum Initial (s)     | 4.0  | 7.0   | 4.0   | 4.0   | 6.0   | 6.0   | 10.0  | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)       | 8.0  | 22.5  | 8.0   | 20.0  | 11.0  | 11.0  | 26.0  | 26.0  | 11.0  | 26.0  |
| Total Split (s)         | 8.0  | 22.5  | 14.0  | 28.5  | 59.0  | 22.0  | 34.5  | 34.5  | 59.0  | 71.5  |
| Total Split (%)         | 6.2% | 17.3% | 10.8% | 21.9% | 45.4% | 16.9% | 26.5% | 26.5% | 45.4% | 55.0% |
| Maximum Green (s)       | 4.0  | 16.0  | 10.0  | 24.5  | 54.0  | 17.0  | 28.5  | 28.5  | 54.0  | 65.5  |
| Yellow Time (s)         | 3.5  | 4.0   | 3.5   | 3.5   | 3.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 0.5  | 2.5   | 0.5   | 0.5   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |      |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0  | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 0.2   | 0.2   | 3.0   | 0.2   |
| Minimum Gap (s)         | 3.0  | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 0.2   | 0.2   | 3.0   | 0.2   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |
| Walk Time (s)           | 4.0  |       |       | 5.0   |       |       | 7.0   | 7.0   |       | 7.0   |
| Flash Dont Walk (s)     |      | 12.0  |       |       | 11.0  |       |       | 13.0  |       | 13.0  |
| Pedestrian Calls (#/hr) |      | 5     |       |       | 0     |       |       | 5     |       | 5     |
| 90th %ile Green (s)     | 4.0  | 16.0  | 10.0  | 24.5  | 54.0  | 17.0  | 28.5  | 28.5  | 54.0  | 65.5  |
| 90th %ile Term Code     | Max  | Ped   | Max   | Hold  | Max   | Max   | Coord | Coord | Max   | Coord |
| 70th %ile Green (s)     | 0.0  | 7.0   | 10.0  | 23.5  | 48.0  | 17.0  | 43.5  | 43.5  | 48.0  | 74.5  |
| 70th %ile Term Code     | Skip | Min   | Max   | Hold  | Gap   | Max   | Coord | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 0.0  | 7.0   | 10.0  | 23.5  | 45.3  | 15.5  | 46.2  | 46.2  | 45.3  | 76.0  |
| 50th %ile Term Code     | Skip | Min   | Max   | Hold  | Gap   | Gap   | Coord | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 0.0  | 7.0   | 10.0  | 23.5  | 25.8  | 13.2  | 65.7  | 65.7  | 25.8  | 78.3  |
| 30th %ile Term Code     | Skip | Min   | Max   | Hold  | Gap   | Gap   | Coord | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 0.0  | 0.0   | 10.0  | 10.0  | 39.2  | 9.8   | 65.8  | 65.8  | 39.2  | 95.2  |
| 10th %ile Term Code     | Skip | Skip  | Max   | Hold  | Gap   | Gap   | Coord | Coord | Gap   | Coord |

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 71 (55%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
10: Beauregard St & Fillmore Ave

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT   | WBR  | NBL   | NBT  | NBR  | SBL   | SBT  | SBR  |
|---------------------|------|-------|-------|------|-------|------|-------|------|------|-------|------|------|
| Lane Configurations |      |       |       |      |       |      |       |      |      |       |      |      |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12    | 12   | 12    | 12   | 12   | 12    | 12   | 12   |
| Grade (%)           |      | -3%   |       |      | -3%   |      |       | -4%  |      |       | 3%   |      |
| Storage Length (ft) | 0    |       | 150   | 0    |       | 0    | 200   |      | 0    | 75    |      | 0    |
| Storage Lanes       | 0    |       | 1     | 0    |       | 0    | 1     |      | 0    | 1     |      | 0    |
| Taper Length (ft)   | 50   |       |       | 50   |       | 50   |       |      | 50   |       |      | 50   |
| 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     |      | 0.98  |       | 1.00 |       | 1.00 |       | 1.00 |      | 1.00  |      | 1.00 |
| Frt                 |      |       | 0.850 |      | 0.991 |      | 0.996 |      |      | 0.984 |      |      |
| Flt Protected       |      | 0.963 |       |      | 0.958 |      | 0.950 |      |      | 0.950 |      |      |
| Satd. Flow (prot)   | 0    | 1821  | 1607  | 0    | 1793  | 0    | 1805  | 3593 | 0    | 1743  | 3414 | 0    |
| Flt Permitted       |      | 0.822 |       |      | 0.740 |      | 0.950 |      |      | 0.950 |      |      |
| Satd. Flow (perm)   | 0    | 1554  | 1570  | 0    | 1385  | 0    | 1805  | 3593 | 0    | 1743  | 3414 | 0    |
| Right Turn on Red   |      |       | Yes   |      |       | Yes  |       |      | Yes  |       |      | Yes  |
| Satd. Flow (RTOR)   |      |       | 86    |      | 3     |      | 3     |      |      | 12    |      |      |
| Link Speed (mph)    |      | 25    |       |      | 25    |      | 35    |      |      | 35    |      |      |
| Link Distance (ft)  |      | 507   |       |      | 309   |      | 809   |      |      | 1125  |      |      |
| Travel Time (s)     |      | 13.8  |       |      | 8.4   |      | 15.8  |      |      | 21.9  |      |      |

Intersection Summary

Area Type: Other

Timings  
10: Beauregard St & Fillmore Ave

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       | ↕     | ↕     |       | ↕     | ↕     | ↕     | ↕     | ↕     |
| Volume (vph)         | 15    | 5     | 80    | 60    | 5     | 85    | 830   | 15    | 375   |
| Turn Type            | Perm  | NA    | pm+ov | Perm  | NA    | Prot  | NA    | Prot  | NA    |
| Protected Phases     |       | 4     | 5     |       | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       |       | 4     |       |       |       |       |       |
| Detector Phase       | 4     | 4     | 5     | 4     | 4     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 14.0  | 14.0  | 6.0   | 14.0  | 14.0  | 6.0   | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)    | 33.0  | 33.0  | 11.0  | 33.0  | 33.0  | 11.0  | 16.0  | 11.0  | 16.0  |
| Total Split (s)      | 48.0  | 48.0  | 24.0  | 48.0  | 48.0  | 24.0  | 67.0  | 15.0  | 58.0  |
| Total Split (%)      | 36.9% | 36.9% | 18.5% | 36.9% | 36.9% | 18.5% | 51.5% | 11.5% | 44.6% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.0  | -2.0  | -1.0  | -2.0  | -2.0  | -1.0  | -2.0  | -1.0  | -2.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             |       |       | Lead  |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |       |
| Act Effct Green (s)  | 18.6  | 27.4  |       | 18.6  | 12.0  | 103.4 | 7.4   | 91.4  |       |
| Actuated g/C Ratio   | 0.14  | 0.21  |       | 0.14  | 0.09  | 0.80  | 0.06  | 0.70  |       |
| v/c Ratio            | 0.09  | 0.21  |       | 0.37  | 0.54  | 0.32  | 0.16  | 0.19  |       |
| Control Delay        | 47.0  | 7.2   |       | 52.6  | 63.6  | 4.9   | 70.9  | 10.1  |       |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Total Delay          | 47.0  | 7.2   |       | 52.6  | 63.6  | 4.9   | 70.9  | 10.1  |       |
| LOS                  | D     | A     |       | D     | E     | A     | E     | B     |       |
| Approach Delay       | 15.0  |       |       | 52.6  |       | 10.2  |       | 12.2  |       |
| Approach LOS         | B     |       |       | D     |       | B     |       | B     |       |

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 83 (64%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.54  
 Intersection Signal Delay: 13.0      Intersection LOS: B  
 Intersection Capacity Utilization 52.8%      ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 10: Beauregard St & Fillmore Ave



Phasings  
10: Beauregard St & Fillmore Ave

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 4     | 5     |       | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases        | 4     |       |       | 4     |       |       |       |       |       |
| Minimum Initial (s)     | 14.0  | 14.0  | 6.0   | 14.0  | 14.0  | 6.0   | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)       | 33.0  | 33.0  | 11.0  | 33.0  | 33.0  | 11.0  | 16.0  | 11.0  | 16.0  |
| Total Split (s)         | 48.0  | 48.0  | 24.0  | 48.0  | 48.0  | 24.0  | 67.0  | 15.0  | 58.0  |
| Total Split (%)         | 36.9% | 36.9% | 18.5% | 36.9% | 36.9% | 18.5% | 51.5% | 11.5% | 44.6% |
| Maximum Green (s)       | 42.0  | 42.0  | 19.0  | 42.0  | 42.0  | 19.0  | 61.0  | 10.0  | 52.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       | Lead  |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.2   | 2.0   | 0.2   |
| Minimum Gap (s)         | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.2   | 2.0   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Walk Time (s)           | 4.0   | 4.0   |       | 4.0   | 4.0   |       |       |       |       |
| Flash Dont Walk (s)     | 23.0  | 23.0  |       | 23.0  | 23.0  |       |       |       |       |
| Pedestrian Calls (#/hr) | 5     | 5     |       | 5     | 5     |       |       |       |       |
| 90th %ile Green (s)     | 27.0  | 27.0  | 15.6  | 27.0  | 27.0  | 15.6  | 78.3  | 7.7   | 70.4  |
| 90th %ile Term Code     | Ped   | Ped   | Gap   | Ped   | Ped   | Gap   | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 14.0  | 14.0  | 12.9  | 14.0  | 14.0  | 12.9  | 92.5  | 6.5   | 86.1  |
| 70th %ile Term Code     | Min   | Min   | Gap   | Min   | Min   | Gap   | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 14.0  | 14.0  | 11.0  | 14.0  | 14.0  | 11.0  | 104.0 | 0.0   | 88.0  |
| 50th %ile Term Code     | Min   | Min   | Gap   | Min   | Min   | Gap   | Coord | Skip  | Coord |
| 30th %ile Green (s)     | 14.0  | 14.0  | 9.2   | 14.0  | 14.0  | 9.2   | 104.0 | 0.0   | 89.8  |
| 30th %ile Term Code     | Min   | Min   | Gap   | Min   | Min   | Gap   | Coord | Skip  | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   | 6.5   | 0.0   | 0.0   | 6.5   | 124.0 | 0.0   | 112.5 |
| 10th %ile Term Code     | Skip  | Skip  | Gap   | Skip  | Skip  | Gap   | Coord | Skip  | Coord |

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 83 (64%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated



Lanes and Geometrics  
11: Mark Center Dr & Seminary Rd

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT  | WBR  | NBL   | NBT  | NBR  | SBL   | SBT  | SBR  |
|---------------------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|
| Lane Configurations | ↔     | ↔↔↔  | ↔    | ↔     | ↔↔↔  | ↔    | ↔     | ↔    | ↔↔↔  | ↔     | ↔    | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12   | 12   |
| Grade (%)           | 0%    |      |      |       | -1%  |      |       |      | 0%   |       |      |      |
| Storage Length (ft) | 225   |      | 400  | 0     |      | 200  | 250   |      | 250  | 150   |      | 150  |
| Storage Lanes       | 1     |      | 1    | 1     |      | 1    | 1     |      | 2    | 1     |      | 1    |
| Taper Length (ft)   | 50    |      |      | 50    |      |      | 50    |      |      | 50    |      |      |
| Lane Util. Factor   | 1.00  | 0.91 | 1.00 | 1.00  | 0.91 | 1.00 | 1.00  | 1.00 | 0.76 | 0.97  | 1.00 | 1.00 |
| Ped Bike Factor     | 0.99  |      |      |       |      |      |       |      |      |       |      |      |
| Frt                 | 0.850 |      |      | 0.850 |      |      | 0.850 |      |      | 0.850 |      |      |
| Flt Protected       | 0.950 |      |      | 0.950 |      |      | 0.950 |      |      | 0.950 |      |      |
| Satd. Flow (prot)   | 1770  | 5085 | 1583 | 1778  | 5111 | 1591 | 1770  | 1863 | 3610 | 3433  | 1863 | 1583 |
| Flt Permitted       | 0.950 |      |      | 0.950 |      |      | 0.950 |      |      | 0.950 |      |      |
| Satd. Flow (perm)   | 1770  | 5085 | 1583 | 1778  | 5111 | 1591 | 1770  | 1863 | 3610 | 3433  | 1863 | 1563 |
| Right Turn on Red   |       |      | Yes  |       |      | Yes  |       |      | No   |       |      | Yes  |
| Satd. Flow (RTOR)   |       |      | 312  |       |      | 87   |       |      |      |       |      | 54   |
| Link Speed (mph)    |       | 35   |      |       | 35   |      |       | 25   |      |       |      | 25   |
| Link Distance (ft)  |       | 692  |      |       | 387  |      |       | 791  |      |       |      | 642  |
| Travel Time (s)     |       | 13.5 |      |       | 7.5  |      |       | 21.6 |      |       |      | 17.5 |

Intersection Summary

Area Type: Other

Timings  
11: Mark Center Dr & Seminary Rd

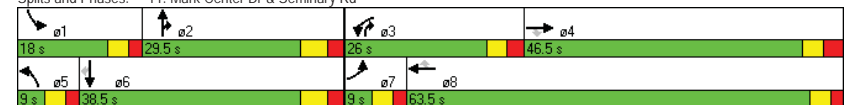
2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBL  | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔    | ↔↔↔   | ↔     | ↔     | ↔↔↔   | ↔     | ↔    | ↔     | ↔↔↔   | ↔     | ↔     | ↔     |
| Volume (vph)         | 35   | 1315  | 290   | 610   | 1730  | 105   | 20   | 15    | 295   | 390   | 130   | 50    |
| Turn Type            | Prot | NA    | Perm  | Prot  | NA    | Perm  | Prot | NA    | pt+ov | Prot  | NA    | Perm  |
| Protected Phases     | 7    | 4     |       | 3     | 8     |       | 5    | 2     | 2 3   | 1     | 6     |       |
| Permitted Phases     |      |       | 4     |       |       | 8     |      |       |       |       |       | 6     |
| Detector Phase       | 7    | 4     | 4     | 3     | 8     | 8     | 5    | 2     | 2 3   | 1     | 6     | 6     |
| Switch Phase         |      |       |       |       |       |       |      |       |       |       |       |       |
| Minimum Initial (s)  | 4.0  | 7.0   | 7.0   | 10.0  | 4.0   | 4.0   | 4.0  | 10.0  |       | 4.0   | 10.0  | 10.0  |
| Minimum Split (s)    | 9.0  | 13.0  | 13.0  | 24.5  | 29.0  | 29.0  | 9.0  | 25.5  |       | 9.0   | 38.5  | 38.5  |
| Total Split (s)      | 9.0  | 46.5  | 46.5  | 26.0  | 63.5  | 63.5  | 9.0  | 29.5  | 55.5  | 18.0  | 38.5  | 38.5  |
| Total Split (%)      | 7.5% | 38.8% | 38.8% | 21.7% | 52.9% | 52.9% | 7.5% | 24.6% | 46.3% | 15.0% | 32.1% | 32.1% |
| Yellow Time (s)      | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 4.0   |       | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 2.0  | 3.0   | 3.0   | 2.5   | 2.0   | 2.0   | 2.0  | 2.5   |       | 2.0   | 2.5   | 2.5   |
| Lost Time Adjust (s) | -1.5 | -2.5  | 0.0   | -1.5  | -2.5  | 0.0   | -2.0 | -2.0  | -1.5  | -1.5  | -1.5  | -1.5  |
| Total Lost Time (s)  | 3.5  | 3.5   | 6.0   | 4.0   | 2.5   | 5.0   | 3.0  | 4.5   | 5.0   | 3.5   | 5.0   | 5.0   |
| Lead/Lag             | Lead | Lag   | Lag   | Lead  | Lag   | Lag   | Lead | Lag   |       | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   |      |       |       |       |       |       |      |       |       |       |       |       |
| Recall Mode          | None | C-Max | C-Max | None  | C-Max | C-Max | None | None  |       | None  | Max   | Max   |
| Act Effct Green (s)  | 5.5  | 43.0  | 40.5  | 22.0  | 64.6  | 62.1  | 6.0  | 25.0  | 50.5  | 14.5  | 37.1  | 37.1  |
| Actuated g/C Ratio   | 0.05 | 0.36  | 0.34  | 0.18  | 0.54  | 0.52  | 0.05 | 0.21  | 0.42  | 0.12  | 0.31  | 0.31  |
| v/c Ratio            | 0.47 | 0.78  | 0.42  | 2.01  | 0.68  | 0.13  | 0.25 | 0.04  | 0.21  | 1.01  | 0.24  | 0.10  |
| Control Delay        | 69.3 | 28.1  | 3.6   | 493.3 | 22.3  | 5.9   | 61.9 | 38.5  | 22.5  | 99.1  | 33.7  | 9.1   |
| Queue Delay          | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 69.3 | 28.1  | 3.6   | 493.3 | 22.3  | 5.9   | 61.9 | 38.5  | 22.5  | 99.1  | 33.7  | 9.1   |
| LOS                  | E    | C     | A     | F     | C     | A     | E    | D     | C     | F     | C     | A     |
| Approach Delay       |      | 24.7  |       |       | 139.1 |       |      | 25.7  |       |       |       | 76.2  |
| Approach LOS         |      | C     |       |       | F     |       |      | C     |       |       |       | E     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 4 (3%), Referenced to phase 4:EBT and 8:WBT, Start of Green  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 2.01  
 Intersection Signal Delay: 86.8  
 Intersection LOS: F  
 Intersection Capacity Utilization 96.7%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 11: Mark Center Dr & Seminary Rd



Phasings  
11: Mark Center Dr & Seminary Rd

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group              | EBL  | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|
| Protected Phases        | 7    | 4     |       | 3     | 8     |       | 5    | 2     | 23    | 1     | 6     |       |
| Permitted Phases        |      |       | 4     |       |       | 8     |      |       |       |       |       | 6     |
| Minimum Initial (s)     | 4.0  | 7.0   | 7.0   | 10.0  | 4.0   | 4.0   | 4.0  | 10.0  |       | 4.0   | 10.0  | 10.0  |
| Minimum Split (s)       | 9.0  | 13.0  | 13.0  | 24.5  | 29.0  | 29.0  | 9.0  | 25.5  |       | 9.0   | 38.5  | 38.5  |
| Total Split (s)         | 9.0  | 46.5  | 46.5  | 26.0  | 63.5  | 63.5  | 9.0  | 29.5  | 55.5  | 18.0  | 38.5  | 38.5  |
| Total Split (%)         | 7.5% | 38.8% | 38.8% | 21.7% | 52.9% | 52.9% | 7.5% | 24.6% | 46.3% | 15.0% | 32.1% | 32.1% |
| Maximum Green (s)       | 4.0  | 40.5  | 40.5  | 20.5  | 58.5  | 58.5  | 4.0  | 23.0  |       | 13.0  | 32.0  | 32.0  |
| Yellow Time (s)         | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 4.0   |       | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 2.0  | 3.0   | 3.0   | 2.5   | 2.0   | 2.0   | 2.0  | 2.5   |       | 2.0   | 2.5   | 2.5   |
| Lead/Lag                | Lead | Lag   | Lag   | Lead  | Lag   | Lag   | Lead | Lag   |       | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?      |      |       |       |       |       |       |      |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0  | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   | 3.0  | 0.2   |       | 3.0   | 0.2   | 0.2   |
| Minimum Gap (s)         | 3.0  | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   | 3.0  | 0.2   |       | 3.0   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | C-Max | C-Max | None  | C-Max | C-Max | None | None  |       | None  | Max   | Max   |
| Walk Time (s)           |      |       |       |       | 7.0   | 7.0   |      |       |       |       | 7.0   | 7.0   |
| Flash Dont Walk (s)     |      |       |       |       | 17.0  | 17.0  |      |       |       |       | 25.0  | 25.0  |
| Pedestrian Calls (#/hr) |      |       |       |       | 0     | 0     |      |       |       |       | 0     | 0     |
| 90th %ile Green (s)     | 4.0  | 40.5  | 40.5  | 20.5  | 58.5  | 58.5  | 4.0  | 23.0  |       | 13.0  | 32.0  | 32.0  |
| 90th %ile Term Code     | Max  | Coord | Coord | Max   | Coord | Coord | Max  | Hold  |       | Max   | MaxR  | MaxR  |
| 70th %ile Green (s)     | 4.0  | 40.5  | 40.5  | 20.5  | 58.5  | 58.5  | 4.0  | 23.0  |       | 13.0  | 32.0  | 32.0  |
| 70th %ile Term Code     | Max  | Coord | Coord | Max   | Coord | Coord | Max  | Hold  |       | Max   | MaxR  | MaxR  |
| 50th %ile Green (s)     | 4.0  | 40.5  | 40.5  | 20.5  | 58.5  | 58.5  | 4.0  | 23.0  |       | 13.0  | 32.0  | 32.0  |
| 50th %ile Term Code     | Max  | Coord | Coord | Max   | Coord | Coord | Max  | Hold  |       | Max   | MaxR  | MaxR  |
| 30th %ile Green (s)     | 0.0  | 40.5  | 40.5  | 20.5  | 67.5  | 67.5  | 0.0  | 23.0  |       | 13.0  | 41.0  | 41.0  |
| 30th %ile Term Code     | Skip | Coord | Coord | Max   | Coord | Coord | Skip | Hold  |       | Max   | MaxR  | MaxR  |
| 10th %ile Green (s)     | 0.0  | 40.5  | 40.5  | 20.5  | 67.5  | 67.5  | 0.0  | 23.0  |       | 13.0  | 41.0  | 41.0  |
| 10th %ile Term Code     | Skip | Coord | Coord | Max   | Coord | Coord | Skip | Hold  |       | Max   | MaxR  | MaxR  |

**Intersection Summary**  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 4 (3%), Referenced to phase 4:EBT and 8:WBT, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
13: Echols Ave & Seminary Rd

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR   |
|---------------------|-------|-------|------|-------|-------|------|------|-------|------|------|------|-------|
| Lane Configurations | ↔     | ↕↕    | ↔    | ↔     | ↕↕    | ↔    | ↔    | ↕↕    | ↔    | ↔    | ↕↕   | ↔     |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   | 12   | 12    | 12   | 12   | 12   | 12    |
| Grade (%)           |       | -1%   |      |       | 1%    |      |      | 0%    |      |      |      | 0%    |
| Storage Length (ft) | 100   |       | 0    | 150   |       | 0    | 0    |       | 0    | 0    | 0    | 0     |
| Storage Lanes       | 1     |       | 0    | 1     |       | 0    | 0    |       | 0    | 0    | 0    | 0     |
| Taper Length (ft)   | 50    |       |      | 50    |       |      | 50   |       |      | 50   |      |       |
| 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  |
| Ped Bike Factor     |       | 1.00  |      |       |       |      |      |       |      |      |      | 0.99  |
| Frt                 |       | 0.999 |      |       | 0.999 |      |      | 0.883 |      |      |      | 0.958 |
| Flt Protected       | 0.950 |       |      | 0.950 |       |      |      | 0.993 |      |      |      | 0.967 |
| Satd. Flow (prot)   | 1778  | 3553  | 0    | 1761  | 3518  | 0    | 0    | 1633  | 0    | 0    | 1716 | 0     |
| Flt Permitted       | 0.128 |       |      | 0.153 |       |      |      | 0.993 |      |      |      | 0.967 |
| Satd. Flow (perm)   | 240   | 3553  | 0    | 284   | 3518  | 0    | 0    | 1633  | 0    | 0    | 1716 | 0     |
| Right Turn on Red   |       |       | Yes  |       |       | Yes  |      |       | Yes  |      |      | Yes   |
| Satd. Flow (RTOR)   |       |       |      |       | 1     |      |      | 102   |      |      |      | 5     |
| Link Speed (mph)    |       | 35    |      |       | 35    |      |      | 25    |      |      |      | 25    |
| Link Distance (ft)  |       | 996   |      |       | 564   |      |      | 704   |      |      |      | 795   |
| Travel Time (s)     |       | 19.4  |      |       | 11.0  |      |      | 19.2  |      |      |      | 21.7  |

**Intersection Summary**  
 Area Type: Other

**Timings**  
13: Echols Ave & Seminary Rd

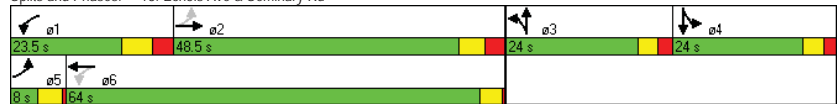
2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBT   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |
| Volume (vph)         | 5     | 1160  | 25    | 1450  | 0     | 0     |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | NA    | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     | 3     | 4     |
| Permitted Phases     | 2     |       | 6     |       |       |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 3     | 4     |
| Switch Phase         |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 6.0   | 10.0  | 4.0   | 7.0   | 7.0   |
| Minimum Split (s)    | 8.0   | 13.0  | 23.5  | 20.0  | 24.0  | 24.0  |
| Total Split (s)      | 8.0   | 48.5  | 23.5  | 64.0  | 24.0  | 24.0  |
| Total Split (%)      | 6.7%  | 40.4% | 19.6% | 53.3% | 20.0% | 20.0% |
| Yellow Time (s)      | 3.5   | 4.0   | 4.5   | 3.5   | 3.0   | 3.0   |
| All-Red Time (s)     | 0.5   | 3.0   | 3.0   | 0.5   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -3.5  | -3.5  | -3.0  | -3.5  | -1.0  | -1.0  |
| Total Lost Time (s)  | 0.5   | 3.5   | 4.5   | 0.5   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | None  |
| Act Effct Green (s)  | 90.6  | 82.4  | 93.1  | 95.5  | 11.2  | 10.4  |
| Actuated g/C Ratio   | 0.76  | 0.69  | 0.78  | 0.80  | 0.09  | 0.09  |
| v/c Ratio            | 0.02  | 0.51  | 0.07  | 0.56  | 0.48  | 0.10  |
| Control Delay        | 6.6   | 12.8  | 10.3  | 13.4  | 19.0  | 38.9  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 6.6   | 12.8  | 10.3  | 13.4  | 19.0  | 38.9  |
| LOS                  | A     | B     | B     | B     | B     | D     |
| Approach Delay       |       | 12.8  |       | 13.3  | 19.0  | 38.9  |
| Approach LOS         |       | B     |       | B     | B     | D     |

**Intersection Summary**

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 114 (95%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 115  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.56  
 Intersection Signal Delay: 13.5  
 Intersection LOS: B  
 Intersection Capacity Utilization 53.9%  
 ICU Level of Service A  
 Analysis Period (min) 15

**Splits and Phases: 13: Echols Ave & Seminary Rd**



**Phasings**  
13: Echols Ave & Seminary Rd

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group              | EBL  | EBT   | WBL   | WBT   | NBT   | SBT   |
|-------------------------|------|-------|-------|-------|-------|-------|
| Protected Phases        | 5    | 2     | 1     | 6     | 3     | 4     |
| Permitted Phases        | 2    |       | 6     |       |       |       |
| Minimum Initial (s)     | 4.0  | 6.0   | 10.0  | 4.0   | 7.0   | 7.0   |
| Minimum Split (s)       | 8.0  | 13.0  | 23.5  | 20.0  | 24.0  | 24.0  |
| Total Split (s)         | 8.0  | 48.5  | 23.5  | 64.0  | 24.0  | 24.0  |
| Total Split (%)         | 6.7% | 40.4% | 19.6% | 53.3% | 20.0% | 20.0% |
| Maximum Green (s)       | 4.0  | 41.5  | 16.0  | 60.0  | 19.0  | 19.0  |
| Yellow Time (s)         | 3.5  | 4.0   | 4.5   | 3.5   | 3.0   | 3.0   |
| All-Red Time (s)        | 0.5  | 3.0   | 3.0   | 0.5   | 2.0   | 2.0   |
| Lead/Lag                | Lead | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |      |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0  | 2.0   | 0.2   | 3.0   | 4.0   | 2.0   |
| Minimum Gap (s)         | 3.0  | 2.0   | 0.2   | 3.0   | 4.0   | 2.0   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | C-Min | None  | C-Min | None  | None  |
| Walk Time (s)           |      |       | 4.0   | 5.0   | 4.0   | 4.0   |
| Flash Dont Walk (s)     |      |       | 12.0  | 11.0  | 15.0  | 15.0  |
| Pedestrian Calls (#/hr) |      |       | 5     | 0     | 5     | 5     |
| 90th %ile Green (s)     | 4.0  | 41.5  | 16.0  | 60.0  | 19.0  | 19.0  |
| 90th %ile Term Code     | Max  | Coord | Ped   | Coord | Ped   | Ped   |
| 70th %ile Green (s)     | 0.0  | 68.4  | 10.0  | 88.9  | 10.1  | 7.0   |
| 70th %ile Term Code     | Skip | Coord | Min   | Coord | Gap   | Min   |
| 50th %ile Green (s)     | 0.0  | 82.7  | 10.0  | 103.2 | 7.8   | 0.0   |
| 50th %ile Term Code     | Skip | Coord | Min   | Coord | Gap   | Skip  |
| 30th %ile Green (s)     | 0.0  | 101.0 | 0.0   | 104.0 | 7.0   | 0.0   |
| 30th %ile Term Code     | Skip | Coord | Skip  | Coord | Min   | Skip  |
| 10th %ile Green (s)     | 0.0  | 101.0 | 0.0   | 104.0 | 7.0   | 0.0   |
| 10th %ile Term Code     | Skip | Coord | Skip  | Coord | Min   | Skip  |

**Intersection Summary**

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 114 (95%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
14: Dawes Ave & Seminary Rd

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT   | NBR   | SBL  | SBT   | SBR  |
|---------------------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|------|
| Lane Configurations | ↔     | ↕    | ↔     | ↔     | ↕     | ↔    | ↔     | ↕     | ↔     | ↔    | ↕     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |      | 0%    |       | 0%    |      | 0%    |       | 0%    |      | 0%    |      |
| Storage Length (ft) | 240   |      | 0     | 55    |       | 0    | 0     |       | 0     | 0    |       | 0    |
| Storage Lanes       | 1     |      | 0     | 1     |       | 0    | 0     |       | 0     | 0    |       | 1    |
| Taper Length (ft)   | 50    |      |       | 50    |       |      | 50    |       |       | 50   |       |      |
| 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 |
| Ped Bike Factor     | 1.00  |      | 1.00  |       | 0.99  |      | 0.99  |       | 0.97  |      | 0.97  |      |
| Frt                 | 0.999 |      | 0.995 |       | 0.927 |      | 0.927 |       | 0.850 |      | 0.850 |      |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      |       | 0.991 |       |      | 0.976 |      |
| Satd. Flow (prot)   | 1770  | 3535 | 0     | 1770  | 3519  | 0    | 0     | 1692  | 0     | 0    | 1818  | 1583 |
| Flt Permitted       | 0.134 |      |       | 0.204 |       |      |       | 0.940 |       |      | 0.880 |      |
| Satd. Flow (perm)   | 250   | 3535 | 0     | 380   | 3519  | 0    | 0     | 1605  | 0     | 0    | 1639  | 1532 |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |       |       | Yes   |      |       | Yes  |
| Satd. Flow (RTOR)   | 1     |      | 6     |       | 32    |      | 32    |       | 22    |      | 22    |      |
| Link Speed (mph)    | 35    |      | 35    |       | 25    |      | 25    |       | 25    |      | 25    |      |
| Link Distance (ft)  | 294   |      | 996   |       | 786   |      | 786   |       | 1290  |      | 1290  |      |
| Travel Time (s)     | 5.7   |      | 19.4  |       | 21.4  |      | 21.4  |       | 35.2  |      | 35.2  |      |

Intersection Summary

Area Type: Other

Timings  
14: Dawes Ave & Seminary Rd

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↔     |
| Volume (vph)         | 35    | 1130  | 35    | 1385  | 10    | 15    | 10    | 10    | 20    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | NA    | Perm  |
| Protected Phases     | 5     | 2     | 1     | 6     |       | 4     |       | 4     |       |
| Permitted Phases     | 2     |       | 6     |       | 4     |       | 4     |       | 4     |
| Detector Phase       | 5     | 2     | 1     | 6     | 4     | 4     | 4     | 4     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 10.0  | 4.0   | 10.0  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)    | 9.0   | 30.0  | 9.0   | 16.0  | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  |
| Total Split (s)      | 9.0   | 84.0  | 9.0   | 84.0  | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  |
| Total Split (%)      | 7.5%  | 70.0% | 7.5%  | 70.0% | 22.5% | 22.5% | 22.5% | 22.5% | 22.5% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | -1.0  | -2.0  | -1.0  | -2.0  | -2.0  | -2.0  | -2.0  | -2.0  | -2.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 99.8  | 97.6  | 99.8  | 97.6  | 12.6  |       | 12.6  |       | 12.6  |
| Actuated g/C Ratio   | 0.83  | 0.81  | 0.83  | 0.81  | 0.10  |       | 0.10  |       | 0.10  |
| v/c Ratio            | 0.14  | 0.42  | 0.10  | 0.54  | 0.30  |       | 0.13  |       | 0.12  |
| Control Delay        | 3.7   | 5.5   | 1.3   | 5.6   | 29.3  |       | 47.8  |       | 17.8  |
| Queue Delay          | 0.0   | 0.2   | 0.0   | 0.0   | 0.0   |       | 0.0   |       | 0.0   |
| Total Delay          | 3.7   | 5.7   | 1.3   | 5.6   | 29.3  |       | 47.8  |       | 17.8  |
| LOS                  | A     | A     | A     | A     | C     |       | D     |       | B     |
| Approach Delay       | 5.7   |       | 5.5   |       | 29.3  |       | 32.8  |       |       |
| Approach LOS         | A     |       | A     |       | C     |       | C     |       |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 107 (89%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.54  
 Intersection Signal Delay: 6.4  
 Intersection LOS: A  
 Intersection Capacity Utilization 68.4%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 14: Dawes Ave & Seminary Rd



Phasings  
14: Dawes Ave & Seminary Rd

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group              | EBL  | EBT   | WBL  | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|-------------------------|------|-------|------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 5    | 2     | 1    | 6     |       | 4     |       | 4     |       |
| Permitted Phases        | 2    |       | 6    |       | 4     |       | 4     |       | 4     |
| Minimum Initial (s)     | 4.0  | 10.0  | 4.0  | 10.0  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)       | 9.0  | 30.0  | 9.0  | 16.0  | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  |
| Total Split (s)         | 9.0  | 84.0  | 9.0  | 84.0  | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  |
| Total Split (%)         | 7.5% | 70.0% | 7.5% | 70.0% | 22.5% | 22.5% | 22.5% | 22.5% | 22.5% |
| Maximum Green (s)       | 4.0  | 78.0  | 4.0  | 78.0  | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  |
| Yellow Time (s)         | 3.0  | 4.0   | 3.0  | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0  | 2.0   | 2.0  | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead | Lag   | Lead | Lag   |       |       |       |       |       |
| Lead-Lag Optimize?      |      |       |      |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0  | 0.2   | 2.0  | 0.2   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Minimum Gap (s)         | 2.0  | 0.2   | 2.0  | 0.2   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | C-Max | None | C-Max | None  | None  | None  | None  | None  |
| Walk Time (s)           | 4.0  |       | 4.0  |       | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Flash Dont Walk (s)     | 20.0 |       | 17.0 |       | 17.0  | 17.0  | 17.0  | 17.0  | 17.0  |
| Pedestrian Calls (#/hr) | 5    |       | 5    |       | 5     | 5     | 5     | 5     | 5     |
| 90th %ile Green (s)     | 4.0  | 78.0  | 4.0  | 78.0  | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  |
| 90th %ile Term Code     | Max  | Coord | Max  | Coord | Ped   | Ped   | Ped   | Ped   | Ped   |
| 70th %ile Green (s)     | 4.0  | 90.8  | 4.0  | 90.8  | 8.2   | 8.2   | 8.2   | 8.2   | 8.2   |
| 70th %ile Term Code     | Max  | Coord | Max  | Coord | Gap   | Gap   | Gap   | Gap   | Gap   |
| 50th %ile Green (s)     | 4.0  | 91.0  | 4.0  | 91.0  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| 50th %ile Term Code     | Max  | Coord | Max  | Coord | Min   | Min   | Min   | Min   | Min   |
| 30th %ile Green (s)     | 0.0  | 100.0 | 0.0  | 100.0 | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| 30th %ile Term Code     | Skip | Coord | Skip | Coord | Min   | Min   | Min   | Min   | Min   |
| 10th %ile Green (s)     | 0.0  | 114.0 | 0.0  | 114.0 | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 10th %ile Term Code     | Skip | Coord | Skip | Coord | Skip  | Skip  | Skip  | Skip  | Skip  |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 107 (89%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
15: Beauregard St & Mark Center Dr

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT  | WBR   | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|-------|------|-------|------|-------|-------|------|-------|-------|-------|------|
| Lane Configurations |       |       |      |       |      |       |       |      |       |       |       |      |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           |       | 0%    |      |       | 0%   |       |       | 0%   |       |       | 0%    |      |
| Storage Length (ft) | 0     |       | 0    | 0     |      | 200   | 190   |      | 200   | 0     |       | 0    |
| Storage Lanes       | 1     |       | 0    | 1     |      | 1     | 1     |      | 1     | 0     |       | 0    |
| Taper Length (ft)   | 50    |       |      | 50    |      |       | 50    |      |       | 50    |       |      |
| Lane Util. Factor   | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00  | 0.91 | 1.00  | 0.97  | 0.95  | 0.95 |
| Ped Bike Factor     |       |       |      |       |      | 0.99  |       |      |       | 0.99  |       |      |
| Frt                 |       | 0.925 |      |       |      | 0.850 |       |      | 0.850 |       | 0.950 |      |
| Flt Protected       | 0.950 |       |      | 0.950 |      |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (prot)   | 1770  | 1723  | 0    | 1770  | 1863 | 1583  | 1770  | 5085 | 1583  | 3433  | 3339  | 0    |
| Flt Permitted       | 0.754 |       |      | 0.751 |      |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (perm)   | 1405  | 1723  | 0    | 1399  | 1863 | 1562  | 1770  | 5085 | 1583  | 3433  | 3339  | 0    |
| Right Turn on Red   |       |       | Yes  |       |      | Yes   |       |      | Yes   |       |       | Yes  |
| Satd. Flow (RTOR)   |       | 5     |      |       |      | 22    |       |      | 280   |       | 130   |      |
| Link Speed (mph)    |       | 25    |      |       | 25   |       |       | 35   |       |       | 35    |      |
| Link Distance (ft)  |       | 275   |      |       | 957  |       |       | 796  |       |       | 762   |      |
| Travel Time (s)     |       | 7.5   |      |       | 26.1 |       |       | 15.5 |       |       | 14.8  |      |

Intersection Summary

Area Type: Other

Timings  
15: Beauregard St & Mark Center Dr

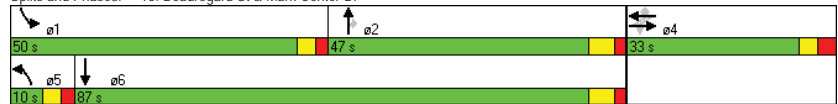
2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBL  | EBT   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   |  |
|----------------------|--|-------|-------|-------|-------|------|-------|-------|-------|-------|--|
| Lane Configurations  | [Diagrams: EBL, EBT, WBL, WBT, WBR, NBL, NBT, NBR, SBL, SBT] |       |       |       |       |      |       |       |       |       |  |
| Volume (vph)         | 230  | 5     | 35    | 5     | 20    | 30   | 1295  | 365   | 650   | 405   |  |
| Turn Type            | Perm   | NA    | Perm  | NA    | Perm  | Prot | NA    | Perm  | Prot  | NA    |  |
| Protected Phases     | 4  |       |       |       | 5     |      |       | 2     |       | 6     |  |
| Permitted Phases     | 4  | 4     | 4     | 4     | 4     | 5    | 2     | 2     | 1     | 6     |  |
| Detector Phase       | 4  | 4     | 4     | 4     | 4     | 5    | 2     | 2     | 1     | 6     |  |
| Switch Phase         |  |       |       |       |       |      |       |       |       |       |  |
| Minimum Initial (s)  | 7.0  | 7.0   | 7.0   | 7.0   | 7.0   | 4.0  | 10.0  | 10.0  | 4.0   | 10.0  |  |
| Minimum Split (s)    | 33.0   | 33.0  | 33.0  | 33.0  | 33.0  | 9.0  | 24.0  | 24.0  | 9.0   | 24.0  |  |
| Total Split (s)      | 33.0   | 33.0  | 33.0  | 33.0  | 33.0  | 10.0 | 47.0  | 47.0  | 50.0  | 87.0  |  |
| Total Split (%)      | 25.4%  | 25.4% | 25.4% | 25.4% | 25.4% | 7.7% | 36.2% | 36.2% | 38.5% | 66.9% |  |
| Yellow Time (s)      | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 4.0  | 4.0   | 4.0   | 3.0   | 4.0   |  |
| All-Red Time (s)     | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 2.0  | 2.0   | 2.0   | 2.0   | 2.0   |  |
| Lost Time Adjust (s) | -2.0   | -2.0  | -2.0  | -2.0  | 0.0   | -1.0 | -2.0  | 0.0   | -1.0  | -2.0  |  |
| Total Lost Time (s)  | 4.0  | 4.0   | 4.0   | 4.0   | 6.0   | 4.0  | 6.0   | 4.0   | 4.0   | 4.0   |  |
| Lead/Lag             |  |       |       |       | Lead  |      | Lag   | Lag   | Lead  | Lag   |  |
| Lead-Lag Optimize?   |  |       |       |       |       |      |       |       |       |       |  |
| Recall Mode          | None   | None  | None  | None  | None  | None | C-Max | C-Max | None  | C-Max |  |
| Act Effct Green (s)  | 26.8   | 26.8  | 26.8  | 26.8  | 24.8  | 5.9  | 58.7  | 56.7  | 32.4  | 89.2  |  |
| Actuated g/C Ratio   | 0.21   | 0.21  | 0.21  | 0.21  | 0.19  | 0.05 | 0.45  | 0.44  | 0.25  | 0.69  |  |
| v/c Ratio            | 0.85   | 0.03  | 0.13  | 0.01  | 0.07  | 0.40 | 0.61  | 0.46  | 0.82  | 0.28  |  |
| Control Delay        | 75.5   | 29.4  | 42.1  | 39.6  | 16.0  | 69.7 | 19.3  | 4.9   | 54.0  | 7.2   |  |
| Queue Delay          | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Total Delay          | 75.5   | 29.4  | 42.1  | 39.6  | 16.0  | 69.7 | 19.3  | 4.9   | 54.0  | 7.2   |  |
| LOS                  | E  | C     | D     | D     | B     | E    | B     | A     | D     | A     |  |
| Approach Delay       | 73.7   |       | 33.1  |       |       | 17.1 |       |       |       | 31.5  |  |
| Approach LOS         | E  |       | C     |       |       | B    |       |       |       | C     |  |

**Intersection Summary**

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 66 (51%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 27.1      Intersection LOS: C  
 Intersection Capacity Utilization 73.0%      ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 15: Beauregard St & Mark Center Dr



Phasings  
15: Beauregard St & Mark Center Dr

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 4     |       | 4     |       |       | 5     |       | 2     |       | 6     |
| Permitted Phases        | 4     | 4     | 4     | 4     | 4     | 5     | 2     | 2     | 1     | 6     |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 4.0   | 10.0  | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)       | 33.0  | 33.0  | 33.0  | 33.0  | 33.0  | 9.0   | 24.0  | 24.0  | 9.0   | 24.0  |
| Total Split (s)         | 33.0  | 33.0  | 33.0  | 33.0  | 33.0  | 10.0  | 47.0  | 47.0  | 50.0  | 87.0  |
| Total Split (%)         | 25.4% | 25.4% | 25.4% | 25.4% | 25.4% | 7.7%  | 36.2% | 36.2% | 38.5% | 66.9% |
| Maximum Green (s)       | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  | 5.0   | 41.0  | 41.0  | 45.0  | 81.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       | Lead  |       | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.2   | 0.2   | 2.0   | 0.2   |
| Minimum Gap (s)         | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.2   | 0.2   | 2.0   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |
| Walk Time (s)           | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   |
| Flash Dont Walk (s)     | 19.0  | 19.0  | 19.0  | 19.0  | 19.0  | 12.0  | 12.0  | 12.0  | 12.0  | 12.0  |
| Pedestrian Calls (#/hr) | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     |
| 90th %ile Green (s)     | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  | 5.0   | 47.9  | 47.9  | 38.1  | 81.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Coord | Coord | Coord | Coord | Coord |
| 70th %ile Green (s)     | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  | 5.0   | 51.7  | 51.7  | 34.3  | 81.0  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Coord | Coord | Coord | Coord | Coord |
| 50th %ile Green (s)     | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  | 5.0   | 54.5  | 54.5  | 31.5  | 81.0  |
| 50th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Coord | Coord | Coord | Coord | Coord |
| 30th %ile Green (s)     | 24.5  | 24.5  | 24.5  | 24.5  | 24.5  | 0.0   | 59.8  | 59.8  | 28.7  | 93.5  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Skip  | Coord | Coord | Coord | Coord |
| 10th %ile Green (s)     | 18.7  | 18.7  | 18.7  | 18.7  | 18.7  | 0.0   | 69.7  | 69.7  | 24.6  | 99.3  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Skip  | Coord | Coord | Coord | Coord |

**Intersection Summary**

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 66 (51%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
16: Beauregard St & Highview Ln

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL   | NBT  | NBR  | SBL   | SBT   | SBR  |
|---------------------|-------|------|------|-------|-------|------|-------|------|------|-------|-------|------|
| Lane Configurations | ↔     | ↔    | ↔    | ↔     | ↔     | ↔    | ↔     | ↔    | ↔    | ↔     | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12   | 12    | 12   | 12   | 12    | 12    | 12   |
| Grade (%)           | 0%    |      |      |       | 0%    |      | 0%    |      |      |       | -1%   |      |
| Storage Length (ft) | 0     |      | 150  | 115   |       | 0    | 185   |      | 0    | 185   |       | 0    |
| Storage Lanes       | 1     |      | 1    | 1     |       | 0    | 1     |      | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50    |      |      | 50    |       |      | 50    |      |      | 50    |       |      |
| 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     | 0.99  |      |      |       | 0.98  |      | 1.00  |      |      |       | 0.99  |      |
| Frt                 | 0.873 |      |      |       | 0.873 |      | 0.992 |      |      |       | 0.976 |      |
| Flt Protected       | 0.950 |      |      | 0.950 |       |      | 0.950 |      |      | 0.950 |       |      |
| Satd. Flow (prot)   | 1770  | 1608 | 0    | 1770  | 1599  | 0    | 1770  | 3504 | 0    | 1778  | 3451  | 0    |
| Flt Permitted       | 0.736 |      |      | 0.736 |       |      | 0.496 |      |      | 0.103 |       |      |
| Satd. Flow (perm)   | 1371  | 1608 | 0    | 1371  | 1599  | 0    | 924   | 3504 | 0    | 193   | 3451  | 0    |
| Right Turn on Red   |       |      | Yes  |       |       | Yes  |       |      | Yes  |       |       | Yes  |
| Satd. Flow (RTOR)   | 27    |      |      |       | 27    |      | 8     |      |      |       | 30    |      |
| Link Speed (mph)    | 25    |      |      |       | 25    |      | 35    |      |      |       | 35    |      |
| Link Distance (ft)  | 429   |      |      |       | 351   |      | 718   |      |      |       | 796   |      |
| Travel Time (s)     | 11.7  |      |      |       | 9.6   |      | 14.0  |      |      |       | 15.5  |      |

Intersection Summary

Area Type: Other

Timings  
16: Beauregard St & Highview Ln

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 380   | 5     | 5     | 5     | 5     | 1285  | 35    | 345   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 4     |       | 4     |       | 4     |       | 5     |       |
| Permitted Phases     | 4     |       | 4     |       | 2     |       | 6     |       |
| Detector Phase       | 4     |       | 4     |       | 5     |       | 2     |       |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 31.0  | 31.0  | 31.0  | 31.0  | 9.0   | 31.0  | 9.0   | 31.0  |
| Total Split (s)      | 37.0  | 37.0  | 37.0  | 37.0  | 9.0   | 84.0  | 9.0   | 84.0  |
| Total Split (%)      | 28.5% | 28.5% | 28.5% | 28.5% | 6.9%  | 64.6% | 6.9%  | 64.6% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  | 31.0  | 31.0  | 31.0  | 31.0  | 84.0  | 79.8  | 87.0  | 85.2  |
| Actuated g/C Ratio   | 0.24  | 0.24  | 0.24  | 0.24  | 0.65  | 0.61  | 0.67  | 0.66  |
| v/c Ratio            | 1.25  | 0.08  | 0.02  | 0.08  | 0.01  | 0.68  | 0.21  | 0.19  |
| Control Delay        | 176.9 | 16.4  | 38.2  | 16.4  | 3.4   | 9.3   | 8.7   | 6.0   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.1   | 0.0   | 0.0   |
| Total Delay          | 176.9 | 16.4  | 38.2  | 16.4  | 3.4   | 9.4   | 8.7   | 6.0   |
| LOS                  | F     | B     | D     | B     | A     | A     | A     | A     |
| Approach Delay       | 165.3 |       | 19.3  |       | 9.3   |       | 6.3   |       |
| Approach LOS         | F     |       | B     |       | A     |       | A     |       |

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 35 (27%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.25  
 Intersection Signal Delay: 37.2  
 Intersection LOS: D  
 Intersection Capacity Utilization 75.7%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 16: Beauregard St & Highview Ln



Phasings  
16: Beauregard St & Highview Ln

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL  | NBT   | SBL  | SBT   |
|-------------------------|-------|-------|-------|-------|------|-------|------|-------|
| Protected Phases        |       | 4     |       | 4     | 5    | 2     | 1    | 6     |
| Permitted Phases        | 4     |       | 4     |       | 2    |       | 6    |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 4.0  | 10.0  | 4.0  | 10.0  |
| Minimum Split (s)       | 31.0  | 31.0  | 31.0  | 31.0  | 9.0  | 31.0  | 9.0  | 31.0  |
| Total Split (s)         | 37.0  | 37.0  | 37.0  | 37.0  | 9.0  | 84.0  | 9.0  | 84.0  |
| Total Split (%)         | 28.5% | 28.5% | 28.5% | 28.5% | 6.9% | 64.6% | 6.9% | 64.6% |
| Maximum Green (s)       | 31.0  | 31.0  | 31.0  | 31.0  | 4.0  | 78.0  | 4.0  | 78.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 2.0  | 2.0   | 2.0  | 2.0   |
| Lead/Lag                |       |       |       |       | Lead | Lag   | Lead | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |      |       |      |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0  | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0  | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None | C-Max | None | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   |      | 7.0   |      | 7.0   |
| Flash Dont Walk (s)     | 18.0  | 18.0  | 18.0  | 18.0  |      | 18.0  |      | 18.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     |      | 0     |      | 0     |
| 90th %ile Green (s)     | 31.0  | 31.0  | 31.0  | 31.0  | 4.0  | 78.0  | 4.0  | 78.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max  | Coord | Max  | Coord |
| 70th %ile Green (s)     | 31.0  | 31.0  | 31.0  | 31.0  | 0.0  | 78.0  | 4.0  | 87.0  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Skip | Coord | Max  | Coord |
| 50th %ile Green (s)     | 31.0  | 31.0  | 31.0  | 31.0  | 0.0  | 78.0  | 4.0  | 87.0  |
| 50th %ile Term Code     | Max   | Max   | Max   | Max   | Skip | Coord | Max  | Coord |
| 30th %ile Green (s)     | 31.0  | 31.0  | 31.0  | 31.0  | 0.0  | 78.0  | 4.0  | 87.0  |
| 30th %ile Term Code     | Max   | Max   | Max   | Max   | Skip | Coord | Max  | Coord |
| 10th %ile Green (s)     | 31.0  | 31.0  | 31.0  | 31.0  | 0.0  | 87.0  | 0.0  | 87.0  |
| 10th %ile Term Code     | Max   | Max   | Max   | Max   | Skip | Coord | Skip | Coord |

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 35 (27%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT  | SBR   |  |
|---------------------|-------|------|-------|-------|-------|------|-------|-------|------|-------|------|-------|--|
| Lane Configurations |       |      |       |       |       |      |       |       |      |       |      |       |  |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  |  |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12   | 12    |  |
| Grade (%)           |       | 0%   |       |       |       | 0%   |       |       | 0%   |       |      | 0%    |  |
| Storage Length (ft) | 235   |      | 0     | 0     |       | 0    | 235   |       | 0    | 150   |      | 170   |  |
| Storage Lanes       | 1     |      | 1     | 1     |       | 1    | 1     |       | 0    | 1     |      | 1     |  |
| Taper Length (ft)   | 50    |      |       | 50    |       |      | 50    |       |      | 50    |      |       |  |
| Lane Util. Factor   | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00 | 0.97  | 0.95  | 0.95 | 1.00  | 0.95 | 1.00  |  |
| Ped Bike Factor     |       |      |       |       | 0.99  |      |       |       |      |       |      | 0.97  |  |
| Frnt                |       |      | 0.850 |       | 0.911 |      |       | 0.999 |      |       |      | 0.850 |  |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      | 0.950 |       |      | 0.950 |      |       |  |
| Satd. Flow (prot)   | 1770  | 1863 | 1583  | 1770  | 1674  | 0    | 3433  | 3536  | 0    | 1770  | 3539 | 1417  |  |
| Flt Permitted       | 0.614 |      |       | 0.754 |       |      | 0.950 |       |      | 0.950 |      |       |  |
| Satd. Flow (perm)   | 1144  | 1863 | 1583  | 1405  | 1674  | 0    | 3433  | 3536  | 0    | 1770  | 3539 | 1381  |  |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |       |       | Yes  |       |      | Yes   |  |
| Satd. Flow (RTOR)   |       |      | 742   |       | 16    |      |       | 1     |      |       |      | 105   |  |
| Link Speed (mph)    |       | 35   |       |       | 15    |      |       | 35    |      |       |      | 35    |  |
| Link Distance (ft)  |       | 1573 |       |       | 252   |      |       | 414   |      |       |      | 921   |  |
| Travel Time (s)     |       | 30.6 |       |       | 11.5  |      |       | 8.1   |      |       |      | 17.9  |  |

Intersection Summary

Area Type: Other

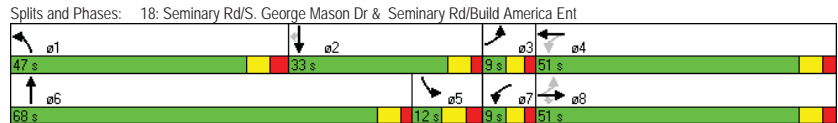


**Timings** 2035 Market with Traffic Mitigation  
**18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent** AM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL  | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| Lane Configurations  | ↖     | ↑     | ↗     | ↖     | ↑     | ↗     | ↖     | ↑    | ↗     | ↖     |
| Volume (vph)         | 145   | 5     | 690   | 20    | 10    | 685   | 725   | 20   | 460   | 100   |
| Turn Type            | pm+pt | NA    | Perm  | pm+pt | NA    | Prot  | NA    | Prot | NA    | Perm  |
| Protected Phases     | 3     | 8     | 8     | 7     | 4     | 1     | 6     | 5    | 2     |       |
| Permitted Phases     | 8     |       | 8     | 4     |       |       |       |      |       | 2     |
| Detector Phase       | 3     | 8     | 8     | 7     | 4     | 1     | 6     | 5    | 2     | 2     |
| Switch Phase         |       |       |       |       |       |       |       |      |       |       |
| Minimum Initial (s)  | 4.0   | 5.0   | 5.0   | 4.0   | 5.0   | 5.0   | 5.0   | 5.0  | 5.0   | 5.0   |
| Minimum Split (s)    | 9.0   | 27.5  | 27.5  | 9.0   | 11.5  | 12.0  | 11.0  | 12.0 | 24.0  | 24.0  |
| Total Split (s)      | 9.0   | 51.0  | 51.0  | 9.0   | 51.0  | 47.0  | 68.0  | 12.0 | 33.0  | 33.0  |
| Total Split (%)      | 6.4%  | 36.4% | 36.4% | 6.4%  | 36.4% | 33.6% | 48.6% | 8.6% | 23.6% | 23.6% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0  | 4.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.5   | 2.5   | 2.0   | 2.5   | 3.0   | 2.0   | 3.0  | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | -3.0  | -3.0  | -3.0  | -2.0  | -3.0 | -2.0  | -2.0  |
| Total Lost Time (s)  | 2.5   | 4.0   | 4.0   | 2.0   | 3.5   | 4.0   | 4.0   | 4.0  | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag  | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |      |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | Max   | None | None  | None  |
| Act Effct Green (s)  | 20.5  | 16.8  | 16.8  | 19.0  | 15.2  | 28.8  | 66.3  | 8.3  | 37.2  | 37.2  |
| Actuated g/C Ratio   | 0.21  | 0.17  | 0.17  | 0.19  | 0.15  | 0.29  | 0.67  | 0.08 | 0.38  | 0.38  |
| v/c Ratio            | 0.53  | 0.02  | 0.84  | 0.07  | 0.10  | 0.73  | 0.33  | 0.15 | 0.37  | 0.18  |
| Control Delay        | 39.5  | 35.0  | 12.4  | 29.0  | 22.1  | 36.7  | 10.7  | 52.6 | 28.0  | 8.2   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   |
| Total Delay          | 39.5  | 35.0  | 12.4  | 29.0  | 22.1  | 36.7  | 10.7  | 52.6 | 28.0  | 8.2   |
| LOS                  | D     | C     | B     | C     | C     | D     | B     | D    | C     | A     |
| Approach Delay       |       | 17.2  |       |       | 25.2  |       | 23.3  |      | 25.5  |       |
| Approach LOS         |       | B     |       |       | C     |       | C     |      | C     |       |

**Intersection Summary**

Cycle Length: 140  
 Actuated Cycle Length: 98.3  
 Natural Cycle: 80  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.84  
 Intersection Signal Delay: 22.0      Intersection LOS: C  
 Intersection Capacity Utilization 69.2%      ICU Level of Service C  
 Analysis Period (min) 15



**Phasings** 2035 Market with Traffic Mitigation  
**18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent** AM PEAK

| Lane Group              | EBL  | EBT   | EBR   | WBL  | WBT   | NBL   | NBT   | SBL  | SBT   | SBR   |
|-------------------------|------|-------|-------|------|-------|-------|-------|------|-------|-------|
| Protected Phases        | 3    | 8     |       | 7    | 4     | 1     | 6     | 5    | 2     |       |
| Permitted Phases        | 8    |       | 8     | 4    |       |       |       |      |       | 2     |
| Minimum Initial (s)     | 4.0  | 5.0   | 5.0   | 4.0  | 5.0   | 5.0   | 5.0   | 5.0  | 5.0   | 5.0   |
| Minimum Split (s)       | 9.0  | 27.5  | 27.5  | 9.0  | 11.5  | 12.0  | 11.0  | 12.0 | 24.0  | 24.0  |
| Total Split (s)         | 9.0  | 51.0  | 51.0  | 9.0  | 51.0  | 47.0  | 68.0  | 12.0 | 33.0  | 33.0  |
| Total Split (%)         | 6.4% | 36.4% | 36.4% | 6.4% | 36.4% | 33.6% | 48.6% | 8.6% | 23.6% | 23.6% |
| Maximum Green (s)       | 4.0  | 44.5  | 44.5  | 4.0  | 44.5  | 40.0  | 62.0  | 5.0  | 27.0  | 27.0  |
| Yellow Time (s)         | 3.0  | 4.0   | 4.0   | 3.0  | 4.0   | 4.0   | 4.0   | 4.0  | 4.0   | 4.0   |
| All-Red Time (s)        | 2.0  | 2.5   | 2.5   | 2.0  | 2.5   | 3.0   | 2.0   | 3.0  | 2.0   | 2.0   |
| Lead/Lag                | Lead | Lag   | Lag   | Lead | Lag   | Lead  | Lead  | Lag  | Lag   | Lag   |
| Lead-Lag Optimize?      |      |       |       |      |       |       |       |      |       |       |
| Vehicle Extension (s)   | 3.0  | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0  | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   |
| Recall Mode             | None | None  | None  | None | None  | Min   | Max   | None | None  | None  |
| Walk Time (s)           |      | 7.0   | 7.0   |      |       |       |       |      | 7.0   | 7.0   |
| Flash Dont Walk (s)     |      | 14.0  | 14.0  |      |       |       |       |      | 11.0  | 11.0  |
| Pedestrian Calls (#/hr) |      | 0     | 0     |      |       |       |       |      | 0     | 0     |
| 90th %ile Green (s)     | 4.0  | 33.7  | 33.7  | 4.0  | 33.7  | 40.0  | 62.0  | 5.0  | 27.0  | 27.0  |
| 90th %ile Term Code     | Max  | Gap   | Gap   | Max  | Hold  | Max   | MaxR  | Max  | Max   | Max   |
| 70th %ile Green (s)     | 4.0  | 15.9  | 15.9  | 4.0  | 15.9  | 29.9  | 62.0  | 5.0  | 37.1  | 37.1  |
| 70th %ile Term Code     | Max  | Gap   | Gap   | Max  | Hold  | Gap   | MaxR  | Max  | Hold  | Hold  |
| 50th %ile Green (s)     | 4.0  | 15.3  | 15.3  | 0.0  | 6.3   | 25.7  | 62.0  | 0.0  | 29.3  | 29.3  |
| 50th %ile Term Code     | Max  | Hold  | Hold  | Skip | Gap   | Gap   | MaxR  | Skip | Hold  | Hold  |
| 30th %ile Green (s)     | 8.1  | 6.6   | 6.6   | 0.0  | 0.0   | 19.1  | 62.0  | 0.0  | 35.9  | 35.9  |
| 30th %ile Term Code     | Hold | Gap   | Gap   | Skip | Skip  | Gap   | MaxR  | Skip | Hold  | Hold  |
| 10th %ile Green (s)     | 7.1  | 5.6   | 5.6   | 0.0  | 0.0   | 16.7  | 62.0  | 0.0  | 38.3  | 38.3  |
| 10th %ile Term Code     | Hold | Gap   | Gap   | Skip | Skip  | Gap   | MaxR  | Skip | Hold  | Hold  |

**Intersection Summary**

Cycle Length: 140  
 Actuated Cycle Length: 98.3  
 Control Type: Semi Act-Uncoord  
 90th %ile Actuated Cycle: 129.2  
 70th %ile Actuated Cycle: 111.4  
 50th %ile Actuated Cycle: 89.8  
 30th %ile Actuated Cycle: 81.1  
 10th %ile Actuated Cycle: 80.1

Lanes and Geometrics  
20: Hampton Dr & Braddock Rd

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT   | NBR   | SBL  | SBT   | SBR  |
|---------------------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|------|
| Lane Configurations | ↔     | ↕    | ↔     | ↔     | ↕     | ↔    | ↔     | ↕     | ↔     | ↔    | ↕     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |      | 0%    |       | 0%    |      | 0%    |       | 0%    |      | 0%    |      |
| Storage Length (ft) | 170   |      | 0     | 125   |       | 0    | 0     |       | 0     | 0    |       | 0    |
| Storage Lanes       | 1     |      | 0     | 1     |       | 0    | 0     |       | 1     | 0    |       | 1    |
| Taper Length (ft)   | 50    |      |       | 50    |       |      | 50    |       |       | 50   |       |      |
| 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 |
| Ped Bike Factor     | 1.00  |      | 1.00  |       | 1.00  |      | 1.00  |       | 1.00  |      | 0.99  |      |
| Frt                 | 0.996 |      | 0.954 |       | 0.850 |      | 0.850 |       | 0.850 |      | 0.850 |      |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      |       | 0.979 |       |      | 0.955 |      |
| Satd. Flow (prot)   | 1770  | 3524 | 0     | 1770  | 3363  | 0    | 0     | 1824  | 1583  | 0    | 1779  | 1583 |
| Flt Permitted       | 0.117 |      |       | 0.486 |       |      |       | 0.828 |       |      | 0.649 |      |
| Satd. Flow (perm)   | 218   | 3524 | 0     | 905   | 3363  | 0    | 0     | 1542  | 1583  | 0    | 1209  | 1562 |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |       |       | Yes   |      |       | Yes  |
| Satd. Flow (RTOR)   | 3     |      | 100   |       | 43    |      | 43    |       | 43    |      | 118   |      |
| Link Speed (mph)    | 35    |      | 35    |       | 25    |      | 25    |       | 25    |      | 25    |      |
| Link Distance (ft)  | 1840  |      | 1126  |       | 416   |      | 416   |       | 1381  |      | 1381  |      |
| Travel Time (s)     | 35.8  |      | 21.9  |       | 11.3  |      | 11.3  |       | 37.7  |      | 37.7  |      |

Intersection Summary

Area Type: Other

Timings  
20: Hampton Dr & Braddock Rd

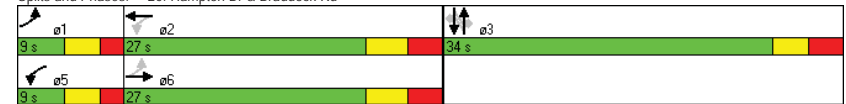
2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↔     | ↔     | ↕     | ↔     |
| Volume (vph)         | 105   | 420   | 40    | 865   | 50    | 70    | 40    | 70    | 5     | 110   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | Perm  | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     | 3     | 3     | 3     | 3     | 3     | 3     |
| Permitted Phases     | 6     | 2     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |
| Detector Phase       | 1     | 6     | 5     | 2     | 3     | 3     | 3     | 3     | 3     | 3     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 9.0   | 16.5  | 9.0   | 16.5  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  |
| Total Split (s)      | 9.0   | 27.0  | 9.0   | 27.0  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  |
| Total Split (%)      | 12.9% | 38.6% | 12.9% | 38.6% | 48.6% | 48.6% | 48.6% | 48.6% | 48.6% | 48.6% |
| Yellow Time (s)      | 3.0   | 3.5   | 3.0   | 3.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| 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)  | 5.0   | 6.5   | 5.0   | 6.5   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 46.6  | 41.0  | 43.8  | 38.1  | 10.2  | 10.2  | 10.2  | 10.2  | 10.2  | 10.2  |
| Actuated g/C Ratio   | 0.67  | 0.59  | 0.63  | 0.54  | 0.15  | 0.15  | 0.15  | 0.15  | 0.15  | 0.15  |
| v/c Ratio            | 0.40  | 0.22  | 0.07  | 0.71  | 0.57  | 0.16  | 0.45  | 0.36  | 0.45  | 0.36  |
| Control Delay        | 9.5   | 9.0   | 3.8   | 12.0  | 37.0  | 9.6   | 34.2  | 8.6   | 34.2  | 8.6   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 9.5   | 9.0   | 3.8   | 12.0  | 37.0  | 9.6   | 34.2  | 8.6   | 34.2  | 8.6   |
| LOS                  | A     | A     | A     | B     | D     | A     | C     | A     | C     | A     |
| Approach Delay       | 9.1   |       | 11.7  |       | 30.2  |       | 19.0  |       | 19.0  |       |
| Approach LOS         | A     |       | B     |       | C     |       | B     |       | B     |       |

Intersection Summary

Cycle Length: 70  
 Actuated Cycle Length: 70  
 Offset: 3 (4%), Referenced to phase 2:WBT and 6:EBTL, Start of Green  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.71  
 Intersection Signal Delay: 13.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 69.6%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 20: Hampton Dr & Braddock Rd



Phasings

2035 Market with Traffic Mitigation

20: Hampton Dr & Braddock Rd

AM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 1     | 6     | 5     | 2     |       | 3     |       |       | 3     |       |
| Permitted Phases        | 6     |       | 2     |       | 3     |       | 3     | 3     |       | 3     |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 9.0   | 16.5  | 9.0   | 16.5  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  |
| Total Split (s)         | 9.0   | 27.0  | 9.0   | 27.0  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  |
| Total Split (%)         | 12.9% | 38.6% | 12.9% | 38.6% | 48.6% | 48.6% | 48.6% | 48.6% | 48.6% | 48.6% |
| Maximum Green (s)       | 4.0   | 20.5  | 4.0   | 20.5  | 28.0  | 28.0  | 28.0  | 28.0  | 28.0  | 28.0  |
| Yellow Time (s)         | 3.0   | 3.5   | 3.0   | 3.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   |       |       |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 4.0   | 2.0   | 4.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Minimum Gap (s)         | 2.0   | 3.0   | 2.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  | None  |
| Walk Time (s)           |       |       |       |       | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |       |       |       | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  |
| Pedestrian Calls (#/hr) |       |       |       |       | 0     | 0     | 0     | 0     | 0     | 0     |
| 90th %ile Green (s)     | 8.0   | 30.9  | 6.1   | 29.0  | 15.5  | 15.5  | 15.5  | 15.5  | 15.5  | 15.5  |
| 90th %ile Term Code     | Gap   | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |
| 70th %ile Green (s)     | 6.6   | 35.1  | 5.4   | 33.9  | 12.0  | 12.0  | 12.0  | 12.0  | 12.0  | 12.0  |
| 70th %ile Term Code     | Gap   | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |
| 50th %ile Green (s)     | 5.9   | 37.5  | 5.0   | 36.6  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  | 10.0  |
| 50th %ile Term Code     | Gap   | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |
| 30th %ile Green (s)     | 5.3   | 49.3  | 0.0   | 39.0  | 8.2   | 8.2   | 8.2   | 8.2   | 8.2   | 8.2   |
| 30th %ile Term Code     | Gap   | Coord | Skip  | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |
| 10th %ile Green (s)     | 0.0   | 52.0  | 0.0   | 52.0  | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   |
| 10th %ile Term Code     | Skip  | Coord | Skip  | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |

Intersection Summary

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 3 (4%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Control Type: Actuated-Coordinated

Lanes and Geometrics

2035 Market with Traffic Mitigation

23: Library Ln & Seminary Rd

AM PEAK


| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT  | NBR   | SBL  | SBT  | SBR   |
|---------------------|-------|-------|------|-------|-------|------|-------|------|-------|------|------|-------|
| Lane Configurations |       | ↑↑↑   |      | ↑↑↑   | ↑↑↑   |      | ↑     | ↑    | ↑     | ↑    | ↑    | ↑     |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12   | 12    | 12   | 12   | 12    |
| Grade (%)           |       | 0%    |      |       | 0%    |      |       | 0%   |       |      |      | 0%    |
| Storage Length (ft) | 150   |       | 0    | 100   |       | 0    | 150   |      | 150   | 150  |      | 150   |
| Storage Lanes       | 1     |       | 0    | 1     |       | 0    | 1     |      | 1     | 1    |      | 1     |
| Taper Length (ft)   | 50    |       |      | 50    |       |      | 50    |      | 50    |      |      | 50    |
| Lane Util. Factor   | 1.00  | 0.91  | 0.91 | 1.00  | 0.91  | 0.91 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  |
| Ped Bike Factor     | 1.00  | 1.00  |      | 0.94  | 1.00  |      | 0.89  |      | 0.98  | 0.99 |      | 0.88  |
| Frnt                |       | 0.998 |      |       | 0.988 |      |       |      | 0.850 |      |      | 0.850 |
| Flt Protected       | 0.950 |       |      | 0.950 |       |      | 0.950 |      |       |      |      | 0.950 |
| Satd. Flow (prot)   | 1770  | 5061  | 0    | 1770  | 5014  | 0    | 1770  | 1863 | 1583  | 1770 | 1863 | 1583  |
| Flt Permitted       | 0.197 |       |      | 0.284 |       |      | 0.950 |      |       |      |      | 0.000 |
| Satd. Flow (perm)   | 367   | 5061  | 0    | 497   | 5014  | 0    | 1578  | 1863 | 1551  | 0    | 1863 | 1397  |
| Right Turn on Red   |       |       | Yes  |       |       | Yes  |       |      | Yes   |      |      | Yes   |
| Satd. Flow (RTOR)   |       | 3     |      |       | 17    |      |       |      | 11    |      |      | 109   |
| Link Speed (mph)    |       | 35    |      |       | 35    |      |       |      | 35    |      |      | 25    |
| Link Distance (ft)  |       | 277   |      |       | 464   |      |       |      | 777   |      |      | 520   |
| Travel Time (s)     |       | 5.4   |      |       | 9.0   |      |       |      | 15.1  |      |      | 14.2  |

Intersection Summary

Area Type: Other

**Timings**  
**23: Library Ln & Seminary Rd**

**2035 Market with Traffic Mitigation**  
 AM PEAK



| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBR   | ø8   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |      |
| Volume (vph)         | 215   | 890   | 20    | 950   | 45    | 5     | 10    | 40    | 265   |      |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | pm+ov |      |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4     |       | 3     | 1     | 8    |
| Permitted Phases     | 6     |       | 2     |       | 4     |       | 4     | 8     | 8     |      |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4     | 4     | 3     | 1     |      |
| Switch Phase         |       |       |       |       |       |       |       |       |       |      |
| Minimum Initial (s)  | 7.0   | 30.0  | 4.0   | 30.0  | 4.0   | 8.0   | 8.0   | 4.0   | 7.0   | 8.0  |
| Minimum Split (s)    | 12.0  | 36.5  | 9.0   | 36.5  | 9.0   | 21.0  | 21.0  | 9.0   | 12.0  | 21.0 |
| Total Split (s)      | 21.0  | 51.0  | 9.0   | 39.0  | 9.0   | 21.0  | 21.0  | 9.0   | 21.0  | 21.0 |
| Total Split (%)      | 23.3% | 56.7% | 10.0% | 43.3% | 10.0% | 23.3% | 23.3% | 10.0% | 23.3% | 23%  |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0  |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Total Lost Time (s)  | 5.0   | 6.0   | 5.0   | 6.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0  |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lead  | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |      |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  | None |
| Act Effct Green (s)  | 74.4  | 71.3  | 61.4  | 54.6  | 9.2   | 8.0   | 8.0   | 4.0   | 13.8  |      |
| Actuated g/C Ratio   | 0.83  | 0.79  | 0.68  | 0.61  | 0.10  | 0.09  | 0.09  | 0.04  | 0.15  |      |
| v/c Ratio            | 0.45  | 0.24  | 0.05  | 0.36  | 0.27  | 0.03  | 0.07  | 0.54  | 0.85  |      |
| Control Delay        | 5.8   | 5.7   | 5.0   | 11.5  | 37.9  | 38.0  | 21.2  | 68.2  | 46.0  |      |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      |
| Total Delay          | 5.8   | 5.7   | 5.0   | 11.5  | 37.9  | 38.0  | 21.2  | 68.2  | 46.0  |      |
| LOS                  | A     | A     | A     | B     | D     | D     | C     | E     | D     |      |
| Approach Delay       |       | 5.7   |       | 11.4  |       | 35.0  |       |       |       |      |
| Approach LOS         |       | A     |       | B     |       | D     |       |       |       |      |

**Intersection Summary**


Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 14.0  
 Intersection LOS: B  
 Intersection Capacity Utilization 63.1%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 23: Library Ln & Seminary Rd



**Phasings**  
**23: Library Ln & Seminary Rd**

**2035 Market with Traffic Mitigation**  
 AM PEAK



| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBR   | ø8   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Protected Phases        | 1     | 6     | 5     | 2     | 7     | 4     |       | 3     | 1     | 8    |
| Permitted Phases        | 6     |       | 2     |       | 4     |       | 4     | 8     | 8     |      |
| Minimum Initial (s)     | 7.0   | 30.0  | 4.0   | 30.0  | 4.0   | 8.0   | 8.0   | 4.0   | 7.0   | 8.0  |
| Minimum Split (s)       | 12.0  | 36.5  | 9.0   | 36.5  | 9.0   | 21.0  | 21.0  | 9.0   | 12.0  | 21.0 |
| Total Split (s)         | 21.0  | 51.0  | 9.0   | 39.0  | 9.0   | 21.0  | 21.0  | 9.0   | 21.0  | 21.0 |
| Total Split (%)         | 23.3% | 56.7% | 10.0% | 43.3% | 10.0% | 23.3% | 23.3% | 10.0% | 23.3% | 23%  |
| Maximum Green (s)       | 16.0  | 45.0  | 4.0   | 33.0  | 4.0   | 16.0  | 16.0  | 4.0   | 16.0  | 16.0 |
| Yellow Time (s)         | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0  |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lead  | Lag  |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |      |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Recall Mode             | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  | None |
| Walk Time (s)           |       | 5.0   |       | 5.0   |       | 5.0   | 5.0   |       | 5.0   |      |
| Flash Dont Walk (s)     |       | 11.0  |       | 11.0  |       | 11.0  | 11.0  |       | 11.0  |      |
| Pedestrian Calls (#/hr) |       | 0     |       | 0     |       | 0     | 0     |       | 0     |      |
| 90th %ile Green (s)     | 16.0  | 50.6  | 6.4   | 41.0  | 17.0  | 8.0   | 8.0   | 4.0   | 16.0  | 0.0  |
| 90th %ile Term Code     | Max   | Coord | Gap   | Coord | Hold  | Min   | Min   | Max   | Max   | Skip |
| 70th %ile Green (s)     | 16.0  | 51.0  | 6.0   | 41.0  | 17.0  | 8.0   | 8.0   | 4.0   | 16.0  | 0.0  |
| 70th %ile Term Code     | Max   | Coord | Gap   | Coord | Hold  | Min   | Min   | Max   | Max   | Skip |
| 50th %ile Green (s)     | 16.0  | 75.0  | 0.0   | 54.0  | 4.0   | 0.0   | 0.0   | 4.0   | 16.0  | 0.0  |
| 50th %ile Term Code     | Max   | Coord | Skip  | Coord | Max   | Skip  | Skip  | Max   | Max   | Skip |
| 30th %ile Green (s)     | 12.9  | 84.0  | 0.0   | 66.1  | 0.0   | 0.0   | 0.0   | 0.0   | 12.9  | 0.0  |
| 30th %ile Term Code     | Gap   | Coord | Skip  | Coord | Skip  | Skip  | Skip  | Skip  | Gap   | Skip |
| 10th %ile Green (s)     | 8.1   | 84.0  | 0.0   | 70.9  | 0.0   | 0.0   | 0.0   | 0.0   | 8.1   | 0.0  |
| 10th %ile Term Code     | Gap   | Coord | Skip  | Coord | Skip  | Skip  | Skip  | Skip  | Gap   | Skip |

**Intersection Summary**

Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
 33: Seminary Rd (S)/Seminary Rd (N) & Seminary Rd  
 2035 Market with Traffic Mitigation  
 AM PEAK

| Lane Group          | EBL  | EBT  | EBR  | WBL  | WBT   | WBR   | NBL  | NBT  | NBR   | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|-------|-------|------|------|-------|------|------|------|
| Lane Configurations |      | ↑    |      |      | ↑↑    | ↑↑    |      |      | ↑↑    |      |      |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12   | 12   | 12    | 12    | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           |      | 0%   |      |      | 0%    |       |      | 0%   |       |      | 0%   |      |
| Storage Length (ft) | 0    |      | 0    | 0    |       | 0     | 0    |      | 0     | 0    |      | 0    |
| Storage Lanes       | 0    |      | 0    | 0    |       | 1     | 0    |      | 2     | 0    |      | 0    |
| Taper Length (ft)   | 50   |      |      | 50   |       |       | 50   |      |       | 50   |      |      |
| Lane Util. Factor   | 1.00 | 1.00 | 1.00 | 1.00 | 0.91  | 0.91  | 1.00 | 1.00 | 0.88  | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      |      |      | 0.949 | 0.850 |      |      | 0.850 |      |      |      |
| Frt                 |      |      |      |      |       |       |      |      |       |      |      |      |
| Flt Protected       |      |      |      |      |       |       |      |      |       |      |      |      |
| Satd. Flow (prot)   | 0    | 1863 | 0    | 0    | 3217  | 1441  | 0    | 0    | 2787  | 0    | 0    | 0    |
| Flt Permitted       |      |      |      |      |       |       |      |      |       |      |      |      |
| Satd. Flow (perm)   | 0    | 1863 | 0    | 0    | 3217  | 1441  | 0    | 0    | 2787  | 0    | 0    | 0    |
| Link Speed (mph)    |      | 35   |      |      | 35    |       |      |      | 35    |      |      | 30   |
| Link Distance (ft)  |      | 269  |      |      | 195   |       |      |      | 278   |      |      | 199  |
| Travel Time (s)     |      | 5.2  |      |      | 3.8   |       |      |      | 5.4   |      |      | 4.5  |

**Intersection Summary**  
 Area Type: Other

Lanes and Geometrics  
 41: Van Dorn St & Kenmore Ave S  
 2035 Market with Traffic Mitigation  
 AM PEAK

| Lane Group          | WBL   | WBR   | NBT   | NBR  | SBL  | SBT   |
|---------------------|-------|-------|-------|------|------|-------|
| Lane Configurations | ↑     | ↑     | ↑↑    |      |      | ↑↑    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900  | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12    | 12   | 12   | 12    |
| Grade (%)           | 0%    |       | 0%    |      |      | 0%    |
| Storage Length (ft) | 0     | 50    |       | 0    | 0    |       |
| Storage Lanes       | 1     | 1     |       | 0    | 0    |       |
| Taper Length (ft)   | 50    |       |       |      | 50   |       |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95  | 0.95 | 0.95 | 0.95  |
| Ped Bike Factor     |       | 0.99  | 1.00  |      |      |       |
| Frt                 |       | 0.850 | 0.992 |      |      |       |
| Flt Protected       | 0.950 |       |       |      |      | 0.999 |
| Satd. Flow (prot)   | 1770  | 1583  | 3504  | 0    | 0    | 3536  |
| Flt Permitted       | 0.950 |       |       |      |      | 0.694 |
| Satd. Flow (perm)   | 1770  | 1561  | 3504  | 0    | 0    | 2456  |
| Right Turn on Red   |       | Yes   |       | Yes  |      |       |
| Satd. Flow (RTOR)   |       | 5     | 12    |      |      |       |
| Link Speed (mph)    | 30    |       | 35    |      |      | 35    |
| Link Distance (ft)  | 908   |       | 2895  |      |      | 1898  |
| Travel Time (s)     | 20.6  |       | 56.4  |      |      | 37.0  |

**Intersection Summary**  
 Area Type: Other



Lanes and Geometrics  
42: Van Dorn St & Sanger Ave/Richenbacher Ave

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL  | EBT   | EBR   | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|---------------------|------|-------|-------|-------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations |      |       |       |       |       |      |       |       |      |       |       |      |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12    | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           |      | 0%    |       |       | 0%    |      |       | 0%    |      |       | 0%    |      |
| Storage Length (ft) | 150  |       | 0     | 0     |       | 150  | 390   |       | 0    | 140   |       | 0    |
| Storage Lanes       | 0    |       | 1     | 1     |       | 1    | 1     |       | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50   |       |       | 50    |       |      | 50    |       |      | 50    |       |      |
| Lane Util. Factor   | 1.00 | 0.95  | 0.95  | 1.00  | 1.00  | 1.00 | 1.00  | 0.95  | 0.95 | 1.00  | 0.95  | 0.95 |
| Ped Bike Factor     |      | 0.99  | 0.96  |       | 0.98  |      |       | 1.00  |      |       | 1.00  |      |
| Frt                 |      | 0.964 | 0.850 |       | 0.915 |      |       | 0.999 |      |       | 0.968 |      |
| Flt Protected       |      | 0.975 |       | 0.950 |       |      | 0.950 |       |      | 0.950 |       |      |
| Satd. Flow (prot)   | 0    | 1646  | 1504  | 1770  | 1667  | 0    | 1770  | 3535  | 0    | 1770  | 3416  | 0    |
| Flt Permitted       |      | 0.975 |       | 0.950 |       |      | 0.383 |       |      | 0.063 |       |      |
| Satd. Flow (perm)   | 0    | 1646  | 1439  | 1770  | 1667  | 0    | 713   | 3535  | 0    | 117   | 3416  | 0    |
| Right Turn on Red   |      |       | No    |       |       | Yes  |       |       | Yes  |       |       | Yes  |
| Satd. Flow (RTOR)   |      |       |       |       | 36    |      |       | 1     |      |       | 24    |      |
| Link Speed (mph)    |      | 25    |       |       | 25    |      |       | 35    |      |       | 35    |      |
| Link Distance (ft)  |      | 517   |       |       | 1172  |      |       | 801   |      |       | 2895  |      |
| Travel Time (s)     |      | 14.1  |       |       | 32.0  |      |       | 15.6  |      |       | 56.4  |      |

Intersection Summary

Area Type: Other

Timings  
42: Van Dorn St & Sanger Ave/Richenbacher Ave

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |
| Volume (vph)         | 90    | 425   | 20    | 50    | 340   | 2155  | 20    | 355   |
| Turn Type            | NA    | pm+ov | Split | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 4     | 5     | 8     | 8     | 5     | 2     | 1     | 6     |
| Permitted Phases     |       | 4     |       |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 5     | 8     | 8     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 26.0  | 9.0   | 26.0  | 26.0  | 9.0   | 27.0  | 9.0   | 27.0  |
| Total Split (s)      | 34.0  | 35.0  | 26.0  | 26.0  | 35.0  | 81.0  | 9.0   | 55.0  |
| Total Split (%)      | 22.7% | 23.3% | 17.3% | 17.3% | 23.3% | 54.0% | 6.0%  | 36.7% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       | Lead  |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  | 29.0  | 51.1  | 14.7  | 14.7  | 91.3  | 84.4  | 69.4  | 63.2  |
| Actuated g/C Ratio   | 0.19  | 0.34  | 0.10  | 0.10  | 0.61  | 0.56  | 0.46  | 0.42  |
| v/c Ratio            | 1.25  | 0.72  | 0.13  | 0.63  | 0.62  | 1.17  | 0.20  | 0.33  |
| Control Delay        | 183.4 | 35.6  | 60.2  | 59.1  | 5.2   | 97.6  | 21.4  | 30.5  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 24.1  | 0.0   | 0.0   |
| Total Delay          | 183.4 | 35.6  | 60.2  | 59.1  | 5.2   | 121.7 | 21.4  | 30.5  |
| LOS                  | F     | D     | E     | E     | A     | F     | C     | C     |
| Approach Delay       | 113.0 |       |       | 59.3  |       | 105.9 |       | 30.1  |
| Approach LOS         | F     |       |       | E     |       | F     |       | C     |

Intersection Summary

Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 93 (62%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.25  
 Intersection Signal Delay: 96.3  
 Intersection LOS: F  
 Intersection Capacity Utilization 107.8%  
 ICU Level of Service G  
 Analysis Period (min) 15

Splits and Phases: 42: Van Dorn St & Sanger Ave/Richenbacher Ave



Phasings

2035 Market with Traffic Mitigation

42: Van Dorn St & Sanger Ave/Richenbacher Ave

AM PEAK

|                         | →     | ↘     | ↙     | ←     | ↖     | ↗     | ↘    | ↓     |
|-------------------------|-------|-------|-------|-------|-------|-------|------|-------|
| Lane Group              | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL  | SBT   |
| Protected Phases        | 4     | 5     | 8     | 8     | 5     | 2     | 1    | 6     |
| Permitted Phases        | 4     |       |       |       |       |       |      |       |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 10.0  | 4.0  | 10.0  |
| Minimum Split (s)       | 26.0  | 9.0   | 26.0  | 26.0  | 9.0   | 27.0  | 9.0  | 27.0  |
| Total Split (s)         | 34.0  | 35.0  | 26.0  | 26.0  | 35.0  | 81.0  | 9.0  | 55.0  |
| Total Split (%)         | 22.7% | 23.3% | 17.3% | 17.3% | 23.3% | 54.0% | 6.0% | 36.7% |
| Maximum Green (s)       | 29.0  | 30.0  | 21.0  | 21.0  | 30.0  | 75.0  | 4.0  | 49.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0  | 2.0   |
| Lead/Lag                | Lead  |       | Lead  |       |       | Lag   |      | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |      |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 0.2   | 3.0  | 0.2   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 0.2   | 3.0  | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | C-Max | None | C-Max |
| Walk Time (s)           | 7.0   |       | 7.0   | 7.0   |       | 7.0   |      | 7.0   |
| Flash Dont Walk (s)     | 14.0  |       | 14.0  | 14.0  |       | 14.0  |      | 14.0  |
| Pedestrian Calls (#/hr) | 10    |       | 10    | 10    |       | 10    |      | 10    |
| 90th %ile Green (s)     | 29.0  | 30.0  | 21.0  | 21.0  | 30.0  | 75.0  | 4.0  | 49.0  |
| 90th %ile Term Code     | Max   | Max   | Ped   | Ped   | Max   | Coord | Max  | Coord |
| 70th %ile Green (s)     | 29.0  | 26.5  | 21.0  | 21.0  | 26.5  | 75.0  | 4.0  | 52.5  |
| 70th %ile Term Code     | Max   | Gap   | Ped   | Ped   | Gap   | Coord | Max  | Coord |
| 50th %ile Green (s)     | 29.0  | 21.5  | 13.5  | 13.5  | 21.5  | 80.2  | 6.3  | 65.0  |
| 50th %ile Term Code     | Max   | Gap   | Gap   | Gap   | Gap   | Coord | Gap  | Coord |
| 30th %ile Green (s)     | 29.0  | 18.5  | 10.9  | 10.9  | 18.5  | 94.1  | 0.0  | 70.6  |
| 30th %ile Term Code     | Max   | Gap   | Gap   | Gap   | Gap   | Coord | Skip | Coord |
| 10th %ile Green (s)     | 29.0  | 13.8  | 7.2   | 7.2   | 13.8  | 97.8  | 0.0  | 79.0  |
| 10th %ile Term Code     | Max   | Gap   | Gap   | Gap   | Gap   | Coord | Skip | Coord |

Intersection Summary

Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 93 (62%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

2035 Market with Traffic Mitigation

43: Van Dorn St/ Van Dorn St & Braddock Rd

AM PEAK

|                     | ↖     | →    | ↘     | ↙     | ←    | ↖     | ↗     | ↘     | ↙    | ↓     | ↘    |      |
|---------------------|-------|------|-------|-------|------|-------|-------|-------|------|-------|------|------|
| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT  | WBR   | NBL   | NBT   | NBR  | SBL   | SBT  | SBR  |
| Lane Configurations | ↖     | ↖↗   |       | ↖     | ↖↗   |       | ↖     | ↖↗    |      | ↖     | ↖↗   |      |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12   | 12   |
| Grade (%)           | 0%    |      | 0%    |       |      | 0%    |       | 0%    |      |       |      |      |
| Storage Length (ft) | 40    |      | 0     | 140   |      | 0     | 150   |       | 0    | 100   |      | 0    |
| Storage Lanes       | 1     |      | 0     | 1     |      | 0     | 1     |       | 0    | 1     |      | 0    |
| Taper Length (ft)   | 50    |      |       | 50    |      |       | 50    |       |      | 50    |      |      |
| Lane Util. Factor   | 1.00  | 0.95 | 0.95  | 1.00  | 0.95 | 0.95  | 1.00  | 0.95  | 0.95 | 1.00  | 0.95 | 0.95 |
| Ped Bike Factor     | 0.99  |      | 1.00  |       |      | 0.99  |       | 0.99  |      |       |      |      |
| Frt                 | 0.917 |      | 0.983 |       |      | 0.940 |       | 0.952 |      |       |      |      |
| Flt Protected       | 0.950 |      |       | 0.950 |      |       | 0.950 |       |      | 0.950 |      |      |
| Satd. Flow (prot)   | 1770  | 3205 | 0     | 1770  | 3469 | 0     | 1770  | 3303  | 0    | 1770  | 3352 | 0    |
| Flt Permitted       | 0.459 |      |       | 0.225 |      |       | 0.529 |       |      | 0.190 |      |      |
| Satd. Flow (perm)   | 855   | 3205 | 0     | 419   | 3469 | 0     | 985   | 3303  | 0    | 354   | 3352 | 0    |
| Right Turn on Red   |       |      | Yes   |       |      | Yes   |       |       | Yes  |       |      | Yes  |
| Satd. Flow (RTOR)   | 196   |      | 10    |       |      | 179   |       | 51    |      |       |      |      |
| Link Speed (mph)    | 35    |      | 35    |       |      | 35    |       | 35    |      |       |      |      |
| Link Distance (ft)  | 1126  |      | 1277  |       |      | 652   |       | 1512  |      |       |      |      |
| Travel Time (s)     | 21.9  |      | 24.9  |       |      | 12.7  |       | 29.5  |      |       |      |      |

Intersection Summary

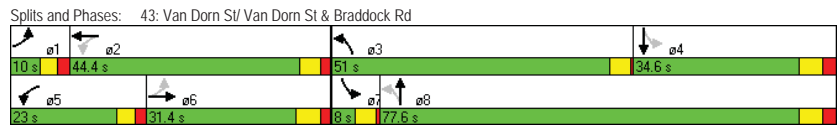
Area Type: Other



**Timings** 2035 Market with Traffic Mitigation  
AM PEAK  
43: Van Dorn St/ Van Dorn St & Braddock Rd

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↖↗    | ↖     | ↖↗    | ↖     | ↖↗    | ↖     | ↖↗    |
| Volume (vph)         | 15    | 230   | 220   | 430   | 800   | 860   | 5     | 115   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 1     | 6     | 5     | 2     | 3     | 8     | 7     | 4     |
| Permitted Phases     | 6     |       | 2     |       | 8     |       | 4     |       |
| Detector Phase       | 1     | 6     | 5     | 2     | 3     | 8     | 7     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 4.0   | 7.0   | 4.0   | 7.0   |
| Minimum Split (s)    | 10.0  | 29.0  | 10.0  | 28.5  | 8.0   | 34.5  | 8.0   | 34.5  |
| Total Split (s)      | 10.0  | 31.4  | 23.0  | 44.4  | 51.0  | 77.6  | 8.0   | 34.6  |
| Total Split (%)      | 7.1%  | 22.4% | 16.4% | 31.7% | 36.4% | 55.4% | 5.7%  | 24.7% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 3.5   | 4.0   | 3.5   | 4.0   | 3.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 0.5   | 2.5   | 0.5   | 2.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -5.0  | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.0   | 6.0   | 5.0   | 5.5   | 4.0   | 1.5   | 4.0   | 6.5   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | Min   | None  | C-Max | None  | Min   | None  | Min   |
| Act Effct Green (s)  | 43.1  | 37.1  | 59.7  | 55.2  | 71.3  | 72.2  | 24.3  | 17.8  |
| Actuated g/C Ratio   | 0.31  | 0.26  | 0.43  | 0.39  | 0.51  | 0.52  | 0.17  | 0.13  |
| v/c Ratio            | 0.05  | 0.56  | 0.70  | 0.38  | 1.12  | 0.86  | 0.05  | 0.39  |
| Control Delay        | 23.5  | 27.5  | 40.6  | 32.9  | 88.1  | 18.1  | 23.0  | 40.8  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 4.4   | 2.5   | 0.0   | 0.0   |
| Total Delay          | 23.5  | 27.5  | 40.6  | 32.9  | 92.5  | 20.5  | 23.0  | 40.8  |
| LOS                  | C     | C     | D     | C     | F     | C     | C     | D     |
| Approach Delay       |       | 27.4  |       | 35.3  |       | 46.3  |       | 40.4  |
| Approach LOS         |       | C     |       | D     |       | D     |       | D     |

**Intersection Summary**  
 Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 124 (89%), Referenced to phase 2:WBTL, Start of Green  
 Natural Cycle: 115  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.12  
 Intersection Signal Delay: 41.1  
 Intersection LOS: D  
 Intersection Capacity Utilization 98.4%  
 ICU Level of Service F  
 Analysis Period (min) 15



**Phasings** 2035 Market with Traffic Mitigation  
AM PEAK  
43: Van Dorn St/ Van Dorn St & Braddock Rd

| Lane Group              | EBL  | EBT   | WBL   | WBT   | NBL   | NBT   | SBL  | SBT   |
|-------------------------|------|-------|-------|-------|-------|-------|------|-------|
| Protected Phases        | 1    | 6     | 5     | 2     | 3     | 8     | 7    | 4     |
| Permitted Phases        | 6    |       | 2     |       | 8     |       | 4    |       |
| Minimum Initial (s)     | 5.0  | 10.0  | 5.0   | 10.0  | 4.0   | 7.0   | 4.0  | 7.0   |
| Minimum Split (s)       | 10.0 | 29.0  | 10.0  | 28.5  | 8.0   | 34.5  | 8.0  | 34.5  |
| Total Split (s)         | 10.0 | 31.4  | 23.0  | 44.4  | 51.0  | 77.6  | 8.0  | 34.6  |
| Total Split (%)         | 7.1% | 22.4% | 16.4% | 31.7% | 36.4% | 55.4% | 5.7% | 24.7% |
| Maximum Green (s)       | 5.0  | 25.4  | 18.0  | 38.9  | 47.0  | 71.1  | 4.0  | 28.1  |
| Yellow Time (s)         | 3.0  | 4.0   | 3.0   | 3.5   | 3.5   | 4.0   | 3.5  | 4.0   |
| All-Red Time (s)        | 2.0  | 2.0   | 2.0   | 2.0   | 0.5   | 2.5   | 0.5  | 2.5   |
| Lead/Lag                | Lead | Lag   | Lead  | Lag   | Lead  | Lag   | Lead | Lag   |
| Lead-Lag Optimize?      |      |       |       |       |       |       |      |       |
| Vehicle Extension (s)   | 3.0  | 0.2   | 3.0   | 0.2   | 3.0   | 2.0   | 3.0  | 2.0   |
| Minimum Gap (s)         | 0.2  | 0.2   | 0.2   | 0.2   | 3.0   | 0.2   | 3.0  | 0.2   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None | Min   | None  | C-Max | None  | Min   | None | Min   |
| Walk Time (s)           |      | 7.0   |       | 7.0   |       | 7.0   |      | 7.0   |
| Flash Dont Walk (s)     |      | 16.0  |       | 16.0  |       | 21.0  |      | 21.0  |
| Pedestrian Calls (#/hr) |      | 0     |       | 0     |       | 0     |      | 0     |
| 90th %ile Green (s)     | 5.0  | 25.4  | 18.0  | 38.9  | 47.0  | 71.1  | 4.0  | 28.1  |
| 90th %ile Term Code     | Max  | Coord | Max   | Coord | Max   | Max   | Max  | Hold  |
| 70th %ile Green (s)     | 5.0  | 33.4  | 18.0  | 46.9  | 47.0  | 71.1  | 0.0  | 20.1  |
| 70th %ile Term Code     | Max  | Coord | Max   | Coord | Max   | Max   | Skip | Hold  |
| 50th %ile Green (s)     | 0.0  | 34.6  | 18.0  | 58.1  | 47.0  | 69.9  | 0.0  | 18.9  |
| 50th %ile Term Code     | Skip | Coord | Max   | Coord | Max   | Gap   | Skip | Hold  |
| 30th %ile Green (s)     | 0.0  | 40.3  | 16.3  | 62.1  | 47.0  | 65.9  | 0.0  | 14.9  |
| 30th %ile Term Code     | Skip | Coord | Gap   | Coord | Max   | Gap   | Skip | Hold  |
| 10th %ile Green (s)     | 0.0  | 52.0  | 12.5  | 70.0  | 47.0  | 58.0  | 0.0  | 7.0   |
| 10th %ile Term Code     | Skip | Coord | Gap   | Coord | Max   | Hold  | Skip | Min   |

**Intersection Summary**  
 Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 124 (89%), Referenced to phase 2:WBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
46: Beauregard St & Old Sanger Ave

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT  | WBR   | NBL   | NBT  | NBR  | SBL   | SBT  | SBR  |
|---------------------|------|-------|-------|------|------|-------|-------|------|------|-------|------|------|
| Lane Configurations |      |       | ↔     |      |      | ↔     |       | ↔↔   |      |       | ↔↔   |      |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12   | 12    | 12    | 12   | 12   | 12    | 12   | 12   |
| Grade (%)           |      | 0%    |       |      | 0%   |       |       | 0%   |      |       | 0%   |      |
| Storage Length (ft) | 150  |       | 0     | 150  |      | 0     | 175   |      | 0    | 125   |      | 0    |
| Storage Lanes       | 0    |       | 1     | 0    |      | 1     | 0     |      | 0    | 0     |      | 0    |
| Taper Length (ft)   | 50   |       |       | 50   |      |       | 50    |      |      | 50    |      |      |
| Lane Util. Factor   | 1.00 | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  | 0.95  | 0.95 | 0.95 | 0.95  | 0.95 | 0.95 |
| Ped Bike Factor     |      |       |       |      |      |       | 1.00  |      |      | 1.00  |      |      |
| Frt                 |      |       | 0.865 |      |      | 0.865 | 0.993 |      |      | 0.996 |      |      |
| Flt Protected       |      | 0.978 |       |      |      |       |       |      |      | 0.999 |      |      |
| Satd. Flow (prot)   | 0    | 0     | 1611  | 0    | 0    | 1611  | 0     | 3509 | 0    | 0     | 3511 | 0    |
| Flt Permitted       |      | 0.895 |       |      |      |       | 0.949 |      |      | 0.917 |      |      |
| Satd. Flow (perm)   | 0    | 0     | 1611  | 0    | 0    | 1611  | 0     | 3330 | 0    | 0     | 3223 | 0    |
| Right Turn on Red   |      |       | No    |      |      | No    |       |      | No   |       |      | No   |
| Satd. Flow (RTOR)   |      |       |       |      |      |       |       |      |      |       |      |      |
| Link Speed (mph)    |      | 25    |       |      | 25   |       | 35    |      |      | 35    |      |      |
| Link Distance (ft)  |      | 869   |       |      | 972  |       | 958   |      |      | 397   |      |      |
| Travel Time (s)     |      | 23.7  |       |      | 26.5 |       | 18.7  |      |      | 7.7   |      |      |

Intersection Summary

Area Type: Other

Timings  
46: Beauregard St & Old Sanger Ave

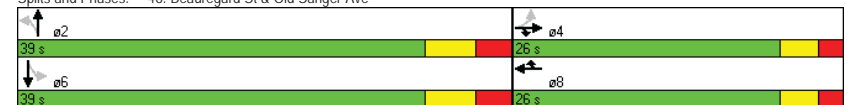
2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBL   | EBT    | EBR   | WBT    | WBR   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|--------|-------|--------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |        | ↔     |        | ↔     |       | ↔↔    |       | ↔↔    |
| Volume (vph)         | 20    | 25     | 105   | 20     | 40    | 10    | 1190  | 10    | 485   |
| Turn Type            | Perm  | NA     | Prot  | NA     | Prot  | Perm  | NA    | Perm  | NA    |
| Protected Phases     |       | 4      | 4     | 8      | 8     |       | 2     |       | 6     |
| Permitted Phases     | 4     |        |       |        |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4      | 4     | 8      | 8     | 2     | 2     | 6     | 6     |
| Switch Phase         |       |        |       |        |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0    | 4.0   | 4.0    | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 26.0  | 26.0   | 26.0  | 26.0   | 26.0  | 28.0  | 28.0  | 28.0  | 28.0  |
| Total Split (s)      | 26.0  | 26.0   | 26.0  | 26.0   | 26.0  | 39.0  | 39.0  | 39.0  | 39.0  |
| Total Split (%)      | 40.0% | 40.0%  | 40.0% | 40.0%  | 40.0% | 60.0% | 60.0% | 60.0% | 60.0% |
| Yellow Time (s)      | 3.0   | 3.0    | 3.0   | 3.0    | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.0    | 2.0   | 2.0    | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| 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)  | 5.0   | 5.0    | 5.0   | 5.0    | 5.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Lead/Lag             |       |        |       |        |       |       |       |       |       |
| Lead-Lag Optimize?   |       |        |       |        |       |       |       |       |       |
| Recall Mode          | None  | None   | None  | None   | None  | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s)  | 0.0   | 18.0   | 0.0   | 17.9   |       | 38.6  |       | 38.6  |       |
| Actuated g/C Ratio   | 0.00  | 0.28   | 0.00  | 0.28   |       | 0.59  |       | 0.59  |       |
| v/c Ratio            |       | no cap | 0.25  | no cap | 0.10  | 0.69  |       | 0.29  |       |
| Control Delay        |       |        | 18.1  |        | 16.8  | 11.4  |       | 9.9   |       |
| Queue Delay          |       |        | 0.0   |        | 0.0   | 0.0   |       | 0.0   |       |
| Total Delay          |       | Error  | 18.1  | Error  | 16.8  | 11.4  |       | 9.9   |       |
| LOS                  |       | F      | B     | F      | B     | B     |       | A     |       |
| Approach Delay       |       | Err    |       | Err    |       | 11.4  |       | 9.9   |       |
| Approach LOS         |       | F      |       | F      |       | B     |       | A     |       |

Intersection Summary

Cycle Length: 65  
 Actuated Cycle Length: 65  
 Offset: 32 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: Err  
 Intersection Signal Delay: Err  
 Intersection Capacity Utilization Err%  
 Analysis Period (min) 15  
 Intersection LOS: F  
 ICU Level of Service H

Splits and Phases: 46: Beauregard St & Old Sanger Ave



Phasings

46: Beauregard St & Old Sanger Ave

2035 Market with Traffic Mitigation

AM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 4     | 4     | 8     | 8     |       | 2     |       | 6     |
| Permitted Phases        |       | 4     |       |       |       | 2     |       | 6     |       |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 26.0  | 26.0  | 26.0  | 26.0  | 26.0  | 28.0  | 28.0  | 28.0  | 28.0  |
| Total Split (s)         | 26.0  | 26.0  | 26.0  | 26.0  | 26.0  | 39.0  | 39.0  | 39.0  | 39.0  |
| Total Split (%)         | 40.0% | 40.0% | 40.0% | 40.0% | 40.0% | 60.0% | 60.0% | 60.0% | 60.0% |
| Maximum Green (s)       | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  | 32.0  | 32.0  | 32.0  | 32.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                |       |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     | 14.0  | 14.0  | 14.0  | 14.0  | 14.0  | 14.0  | 14.0  | 14.0  | 14.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     |
| 90th %ile Green (s)     | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  | 32.0  | 32.0  | 32.0  | 32.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Coord | Coord | Coord | Coord |
| 70th %ile Green (s)     | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  | 32.0  | 32.0  | 32.0  | 32.0  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Coord | Coord | Coord | Coord |
| 50th %ile Green (s)     | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  | 32.0  | 32.0  | 32.0  | 32.0  |
| 50th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Coord | Coord | Coord | Coord |
| 30th %ile Green (s)     | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  | 32.0  | 32.0  | 32.0  | 32.0  |
| 30th %ile Term Code     | Max   | Max   | Max   | Hold  | Hold  | Coord | Coord | Coord | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 58.0  | 58.0  | 58.0  | 58.0  |
| 10th %ile Term Code     | Skip  | Skip  | Skip  | Skip  | Skip  | Coord | Coord | Coord | Coord |

Intersection Summary

Cycle Length: 65

Actuated Cycle Length: 65

Offset: 32 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Control Type: Actuated-Coordinated

Lanes and Geometrics

47: Van Dorn St/Van Dorn St & Taney Ave

2035 Market with Traffic Mitigation

AM PEAK

| Lane Group                | WBL   | WBR   | NBT   | NBR  | SBL   | SBT  |
|---------------------------|-------|-------|-------|------|-------|------|
| Lane Configurations       |       |       |       |      |       |      |
| Ideal Flow (vphpl)        | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)           | 12    | 12    | 12    | 12   | 12    | 12   |
| Grade (%)                 | 0%    |       | 0%    |      |       | 0%   |
| Storage Length (ft)       | 0     | 85    |       | 0    | 180   |      |
| Storage Lanes             | 1     | 1     |       | 0    | 1     |      |
| Taper Length (ft)         | 50    |       |       |      | 50    |      |
| Lane Util. Factor         | 1.00  | 1.00  | 0.95  | 0.95 | 1.00  | 0.95 |
| Ped Bike Factor           |       | 0.99  | 1.00  |      |       |      |
| Fr <sub>t</sub>           |       | 0.850 | 0.993 |      |       |      |
| Fl <sub>t</sub> Protected | 0.950 |       |       |      | 0.950 |      |
| Satd. Flow (prot)         | 1770  | 1583  | 3509  | 0    | 1770  | 3539 |
| Fl <sub>t</sub> Permitted | 0.950 |       |       |      | 0.950 |      |
| Satd. Flow (perm)         | 1770  | 1561  | 3509  | 0    | 1770  | 3539 |
| Right Turn on Red         |       | Yes   |       | Yes  |       |      |
| Satd. Flow (RTOR)         |       | 46    | 10    |      |       |      |
| Link Speed (mph)          | 25    |       | 35    |      |       | 35   |
| Link Distance (ft)        | 1013  |       | 910   |      |       | 801  |
| Travel Time (s)           | 27.6  |       | 17.7  |      |       | 15.6 |

Intersection Summary

Area Type: Other

Timings

2035 Market with Traffic Mitigation  
AM PEAK

47: Van Dorn St/Van Dorn St & Taney Ave

| Lane Group           | WBL   | WBR   | NBT   | SBL  | SBT   |
|----------------------|-------|-------|-------|------|-------|
| Lane Configurations  | ↔     | ↔     | ↑     | ↔    | ↔     |
| Volume (vph)         | 170   | 75    | 2435  | 45   | 755   |
| Turn Type            | NA    | Perm  | NA    | Prot | NA    |
| Protected Phases     | 2     |       | 1     | 3    | 1 3   |
| Permitted Phases     |       | 2     |       |      |       |
| Detector Phase       | 2     | 2     | 1     | 3    | 1 3   |
| Switch Phase         |       |       |       |      |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 10.0  | 4.0  |       |
| Minimum Split (s)    | 25.0  | 25.0  | 16.0  | 9.0  |       |
| Total Split (s)      | 25.0  | 25.0  | 116.0 | 9.0  | 125.0 |
| Total Split (%)      | 16.7% | 16.7% | 77.3% | 6.0% | 83.3% |
| Yellow Time (s)      | 3.0   | 3.0   | 4.0   | 3.0  |       |
| All-Red Time (s)     | 3.0   | 3.0   | 2.0   | 2.0  |       |
| Lost Time Adjust (s) | -3.0  | -3.0  | -3.0  | -2.0 | -3.0  |
| Total Lost Time (s)  | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   |
| Lead/Lag             | Lag   | Lag   | Lead  |      |       |
| Lead-Lag Optimize?   |       |       |       |      |       |
| Recall Mode          | None  | None  | C-Max | None |       |
| Act Effct Green (s)  | 20.4  | 20.4  | 113.0 | 7.6  | 123.6 |
| Actuated g/C Ratio   | 0.14  | 0.14  | 0.75  | 0.05 | 0.82  |
| v/c Ratio            | 0.76  | 0.32  | 1.04  | 0.53 | 0.28  |
| Control Delay        | 82.6  | 31.2  | 48.2  | 97.8 | 1.7   |
| Queue Delay          | 0.0   | 0.1   | 165.3 | 0.0  | 0.0   |
| Total Delay          | 82.6  | 31.3  | 213.6 | 97.8 | 1.7   |
| LOS                  | F     | C     | F     | F    | A     |
| Approach Delay       | 66.8  |       | 213.6 |      | 7.1   |
| Approach LOS         | E     |       | F     |      | A     |

Intersection Summary

Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 124 (83%), Referenced to phase 1:NBSB, Start of Yellow  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.04  
 Intersection Signal Delay: 157.8      Intersection LOS: F  
 Intersection Capacity Utilization 87.7%      ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 47: Van Dorn St/Van Dorn St & Taney Ave



Phasings

2035 Market with Traffic Mitigation  
AM PEAK

47: Van Dorn St/Van Dorn St & Taney Ave

| Lane Group              | WBL   | WBR   | NBT   | SBL  | SBT   |
|-------------------------|-------|-------|-------|------|-------|
| Protected Phases        | 2     |       | 1     | 3    | 1 3   |
| Permitted Phases        |       | 2     |       |      |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 10.0  | 4.0  |       |
| Minimum Split (s)       | 25.0  | 25.0  | 16.0  | 9.0  |       |
| Total Split (s)         | 25.0  | 25.0  | 116.0 | 9.0  | 125.0 |
| Total Split (%)         | 16.7% | 16.7% | 77.3% | 6.0% | 83.3% |
| Maximum Green (s)       | 19.0  | 19.0  | 110.0 | 4.0  |       |
| Yellow Time (s)         | 3.0   | 3.0   | 4.0   | 3.0  |       |
| All-Red Time (s)        | 3.0   | 3.0   | 2.0   | 2.0  |       |
| Lead/Lag                | Lag   | Lag   | Lead  |      |       |
| Lead-Lag Optimize?      |       |       |       |      |       |
| Vehicle Extension (s)   | 2.0   | 2.0   | 0.2   | 2.0  |       |
| Minimum Gap (s)         | 2.0   | 2.0   | 0.2   | 2.0  |       |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0  |       |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0  |       |
| Recall Mode             | None  | None  | C-Max | None |       |
| Walk Time (s)           | 4.0   | 4.0   |       |      |       |
| Flash Dont Walk (s)     | 15.0  | 15.0  |       |      |       |
| Pedestrian Calls (#/hr) | 0     | 0     |       |      |       |
| 90th %ile Green (s)     | 19.0  | 19.0  | 110.0 | 4.0  |       |
| 90th %ile Term Code     | Max   | Max   | Coord | Max  |       |
| 70th %ile Green (s)     | 19.0  | 19.0  | 110.0 | 4.0  |       |
| 70th %ile Term Code     | Max   | Max   | Coord | Max  |       |
| 50th %ile Green (s)     | 19.0  | 19.0  | 110.0 | 4.0  |       |
| 50th %ile Term Code     | Max   | Max   | Coord | Max  |       |
| 30th %ile Green (s)     | 17.0  | 17.0  | 110.0 | 6.0  |       |
| 30th %ile Term Code     | Gap   | Gap   | Coord | Max  |       |
| 10th %ile Green (s)     | 12.8  | 12.8  | 110.0 | 10.2 |       |
| 10th %ile Term Code     | Gap   | Gap   | Coord | Max  |       |

Intersection Summary

Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 124 (83%), Referenced to phase 1:NBSB, Start of Yellow  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
51: Beauregard St & New Sanger Ave

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT  | WBR  | NBL   | NBT  | NBR  | SBL   | SBT  | SBR  |
|---------------------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|
| Lane Configurations | ↔     | ↔    | ↔    | ↔     | ↔    | ↔    | ↔     | ↔    | ↔    | ↔     | ↔    | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12   | 12   |
| Grade (%)           | 0%    |      |      | 0%    |      |      | 0%    |      |      | 0%    |      |      |
| Storage Length (ft) | 150   |      | 200  | 0     |      | 200  | 150   |      | 0    | 175   |      | 0    |
| Storage Lanes       | 1     |      | 1    | 0     |      | 1    | 1     |      | 0    | 0     |      | 0    |
| Taper Length (ft)   | 50    |      |      | 50    |      |      | 50    |      |      | 50    |      |      |
| 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     | 0.850 |      |      | 0.850 |      |      | 0.991 |      |      | 0.990 |      |      |
| Frt Protected       | 0.950 |      |      |       |      |      | 0.950 |      |      |       |      |      |
| Satd. Flow (prot)   | 1770  | 1863 | 1583 | 0     | 1863 | 1583 | 1770  | 3507 | 0    | 0     | 3504 | 0    |
| Frt Permitted       | 0.461 |      |      |       |      |      | 0.457 |      |      |       |      |      |
| Satd. Flow (perm)   | 859   | 1863 | 1583 | 0     | 1863 | 1583 | 851   | 3507 | 0    | 0     | 3504 | 0    |
| Right Turn on Red   |       |      | Yes  |       |      | Yes  |       |      | Yes  |       |      | Yes  |
| Satd. Flow (RTOR)   |       |      | 113  |       |      | 124  |       | 9    |      |       | 9    |      |
| Link Speed (mph)    |       | 25   |      |       | 25   |      |       | 35   |      |       | 35   |      |
| Link Distance (ft)  |       | 643  |      |       | 940  |      |       | 397  |      |       | 531  |      |
| Travel Time (s)     |       | 17.5 |      |       | 25.6 |      |       | 7.7  |      |       | 10.3 |      |

Intersection Summary

Area Type: Other

Timings  
51: Beauregard St & New Sanger Ave

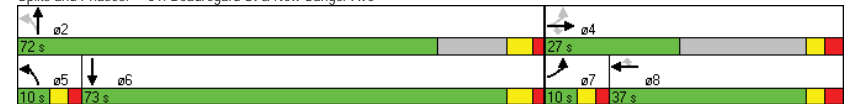
2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBT   | WBR   | NBL   | NBT   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 70    | 25    | 105   | 45    | 115   | 205   | 985   | 405   |
| Turn Type            | pm+pt | NA    | Perm  | NA    | Perm  | pm+pt | NA    | NA    |
| Protected Phases     | 7     | 4     |       | 8     |       | 5     | 2     | 6     |
| Permitted Phases     | 4     |       | 4     |       | 8     | 2     |       |       |
| Detector Phase       | 7     | 4     | 4     | 8     | 8     | 5     | 2     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 9.0   | 27.0  | 27.0  | 27.0  | 27.0  | 9.0   | 27.0  | 27.0  |
| Total Split (s)      | 10.0  | 27.0  | 27.0  | 37.0  | 37.0  | 10.0  | 72.0  | 73.0  |
| Total Split (%)      | 7.7%  | 20.8% | 20.8% | 28.5% | 28.5% | 7.7%  | 55.4% | 56.2% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -5.0  | -5.0  | -5.0  |
| Total Lost Time (s)  | 5.0   | 6.0   | 6.0   | 6.0   | 6.0   | 0.0   | 1.0   | 1.0   |
| Lead/Lag             | Lead  |       |       | Lag   | Lag   | Lead  |       | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | C-Max |
| Act Effct Green (s)  | 17.7  | 16.7  | 16.7  | 8.7   | 8.7   | 107.3 | 106.3 | 92.3  |
| Actuated g/C Ratio   | 0.14  | 0.13  | 0.13  | 0.07  | 0.07  | 0.83  | 0.82  | 0.71  |
| v/c Ratio            | 0.49  | 0.11  | 0.37  | 0.38  | 0.56  | 0.27  | 0.39  | 0.19  |
| Control Delay        | 60.1  | 48.3  | 12.0  | 53.9  | 24.3  | 1.0   | 0.7   | 4.7   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.7   | 0.5   | 0.0   |
| Total Delay          | 60.1  | 48.3  | 12.0  | 53.9  | 24.3  | 1.7   | 1.2   | 4.7   |
| LOS                  | E     | D     | B     | D     | C     | A     | A     | A     |
| Approach Delay       |       | 33.3  |       | 32.6  |       |       | 1.3   | 4.7   |
| Approach LOS         |       | C     |       | C     |       |       | A     | A     |

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green, Master Intersection  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.56  
 Intersection Signal Delay: 7.6  
 Intersection Capacity Utilization 52.6%  
 Analysis Period (min) 15  
 Intersection LOS: A  
 ICU Level of Service A

Splits and Phases: 51: Beauregard St & New Sanger Ave



Phasings  
51: Beauregard St & New Sanger Ave

2035 Market with Traffic Mitigation  
AM PEAK



| Lane Group              | EBL  | EBT   | EBR   | WBT   | WBR   | NBL   | NBT   | SBT   |
|-------------------------|------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 7    | 4     |       | 8     |       | 5     | 2     | 6     |
| Permitted Phases        | 4    |       | 4     |       | 8     |       | 2     |       |
| Minimum Initial (s)     | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 9.0  | 27.0  | 27.0  | 27.0  | 27.0  | 9.0   | 27.0  | 27.0  |
| Total Split (s)         | 10.0 | 27.0  | 27.0  | 37.0  | 37.0  | 10.0  | 72.0  | 73.0  |
| Total Split (%)         | 7.7% | 20.8% | 20.8% | 28.5% | 28.5% | 7.7%  | 55.4% | 56.2% |
| Maximum Green (s)       | 5.0  | 21.0  | 21.0  | 31.0  | 31.0  | 5.0   | 66.0  | 67.0  |
| Yellow Time (s)         | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 2.0  | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead |       |       | Lag   | Lag   | Lead  |       | Lag   |
| Lead-Lag Optimize?      |      |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 4.0   |
| Minimum Gap (s)         | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | None  | None  | None  | None  | C-Max | C-Max |       |
| Walk Time (s)           |      | 7.0   | 7.0   |       | 7.0   |       | 7.0   | 7.0   |
| Flash Dont Walk (s)     |      | 14.0  | 14.0  |       | 14.0  |       | 14.0  | 14.0  |
| Pedestrian Calls (#/hr) |      | 0     | 0     |       | 0     |       | 0     | 0     |
| 90th %ile Green (s)     | 5.0  | 22.0  | 22.0  | 12.0  | 12.0  | 11.6  | 96.0  | 79.4  |
| 90th %ile Term Code     | Max  | Hold  | Hold  | Gap   | Gap   | Gap   | Coord | Coord |
| 70th %ile Green (s)     | 5.0  | 20.0  | 20.0  | 10.0  | 10.0  | 9.9   | 98.0  | 83.1  |
| 70th %ile Term Code     | Max  | Hold  | Hold  | Gap   | Gap   | Gap   | Coord | Coord |
| 50th %ile Green (s)     | 5.0  | 18.7  | 18.7  | 8.7   | 8.7   | 9.0   | 99.3  | 85.3  |
| 50th %ile Term Code     | Max  | Hold  | Hold  | Gap   | Gap   | Gap   | Coord | Coord |
| 30th %ile Green (s)     | 5.0  | 17.4  | 17.4  | 7.4   | 7.4   | 8.1   | 100.6 | 87.5  |
| 30th %ile Term Code     | Max  | Hold  | Hold  | Gap   | Gap   | Gap   | Coord | Coord |
| 10th %ile Green (s)     | 0.0  | 5.5   | 5.5   | 5.5   | 5.5   | 6.3   | 112.5 | 101.2 |
| 10th %ile Term Code     | Skip | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Coord |

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 0 (0%), Referenced to phase 2:NBL and 6:SBT, Start of Green, Master Intersection  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
52: Beauregard St & Rayburn Ave

2035 Market with Traffic Mitigation  
AM PEAK



| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT   | WBR   | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|---------------------|------|-------|-------|------|-------|-------|-------|-------|------|-------|-------|------|
| Lane Configurations |      | ↕     | ↕     |      | ↕     | ↕     | ↕     | ↕↔    |      | ↕     | ↕     | ↕    |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           |      | 0%    |       |      | 0%    |       |       | 0%    |      |       | 0%    |      |
| Storage Length (ft) | 0    |       | 100   | 0    |       | 150   | 190   |       | 0    | 175   |       | 0    |
| Storage Lanes       | 0    |       | 1     | 0    |       | 1     | 1     |       | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50   |       |       | 50   |       |       | 50    |       |      | 50    |       |      |
| 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     |      |       |       |      | 0.99  | 0.96  |       | 1.00  |      |       | 0.99  |      |
| Frt                 |      |       | 0.850 |      |       | 0.850 |       | 0.993 |      |       | 0.962 |      |
| Flt Protected       |      | 0.954 |       |      | 0.963 |       | 0.950 |       |      | 0.950 |       |      |
| Satd. Flow (prot)   | 0    | 1777  | 1583  | 0    | 1794  | 1583  | 1770  | 3499  | 0    | 1770  | 3384  | 0    |
| Flt Permitted       |      | 0.720 |       |      | 0.546 |       | 0.497 |       |      | 0.210 |       |      |
| Satd. Flow (perm)   | 0    | 1341  | 1583  | 0    | 1007  | 1523  | 926   | 3499  | 0    | 391   | 3384  | 0    |
| Right Turn on Red   |      |       | Yes   |      |       | Yes   |       |       | Yes  |       |       | Yes  |
| Satd. Flow (RTOR)   |      |       | 10    |      |       | 43    |       | 6     |      | 66    |       |      |
| Link Speed (mph)    |      | 25    |       |      | 25    |       |       | 35    |      | 35    |       |      |
| Link Distance (ft)  |      | 354   |       |      | 559   |       |       | 713   |      | 718   |       |      |
| Travel Time (s)     |      | 9.7   |       |      | 15.2  |       |       | 13.9  |      | 14.0  |       |      |

Intersection Summary

Area Type: Other

**Timings**  
**52: Beauregard St & Rayburn Ave**

**2035 Market with Traffic Mitigation**  
 AM PEAK



| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       | ↕     | ↕     |       | ↕     | ↕     | ↕     | ↕     | ↕     | ↕     |
| Volume (vph)         | 345   | 15    | 20    | 15    | 5     | 40    | 55    | 980   | 5     | 275   |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | Perm  | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     |       | 4     |       |       | 4     |       | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 4     | 4     |       | 4     | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 9.0   | 22.0  | 9.0   | 22.0  |
| Total Split (s)      | 37.0  | 37.0  | 37.0  | 37.0  | 37.0  | 37.0  | 9.0   | 84.0  | 9.0   | 84.0  |
| Total Split (%)      | 28.5% | 28.5% | 28.5% | 28.5% | 28.5% | 28.5% | 6.9%  | 64.6% | 6.9%  | 64.6% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max |       |
| Act Effct Green (s)  | 31.5  | 31.5  |       | 31.5  | 31.5  | 87.0  | 85.2  | 84.0  | 79.8  |       |
| Actuated g/C Ratio   | 0.24  | 0.24  |       | 0.24  | 0.24  | 0.67  | 0.66  | 0.65  | 0.61  |       |
| v/c Ratio            | 1.19  | 0.06  |       | 0.09  | 0.11  | 0.09  | 0.48  | 0.02  | 0.19  |       |
| Control Delay        | 155.1 | 26.0  |       | 39.4  | 11.5  | 5.1   | 8.0   | 2.6   | 3.4   |       |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Total Delay          | 155.1 | 26.0  |       | 39.4  | 11.5  | 5.1   | 8.0   | 2.6   | 3.4   |       |
| LOS                  | F     | C     |       | D     | B     | A     | A     | A     | A     |       |
| Approach Delay       | 148.1 |       |       | 20.7  |       |       | 7.9   |       | 3.4   |       |
| Approach LOS         | F     |       |       | C     |       |       | A     |       | A     |       |

**Intersection Summary**

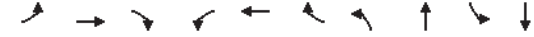
Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 53 (41%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.19  
 Intersection Signal Delay: 35.6  
 Intersection LOS: D  
 Intersection Capacity Utilization 73.9%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 52: Beauregard St & Rayburn Ave



**Phasings**  
**52: Beauregard St & Rayburn Ave**

**2035 Market with Traffic Mitigation**  
 AM PEAK



| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | SBL  | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|
| Protected Phases        |       | 4     |       |       | 4     |       | 5    | 2     | 1    | 6     |
| Permitted Phases        | 4     |       | 4     | 4     |       | 4     |      |       | 6    |       |
| Minimum Initial (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 4.0  | 10.0  | 4.0  | 10.0  |
| Minimum Split (s)       | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 9.0  | 22.0  | 9.0  | 22.0  |
| Total Split (s)         | 37.0  | 37.0  | 37.0  | 37.0  | 37.0  | 37.0  | 9.0  | 84.0  | 9.0  | 84.0  |
| Total Split (%)         | 28.5% | 28.5% | 28.5% | 28.5% | 28.5% | 28.5% | 6.9% | 64.6% | 6.9% | 64.6% |
| Maximum Green (s)       | 31.5  | 31.5  | 31.5  | 31.5  | 31.5  | 31.5  | 4.0  | 78.0  | 4.0  | 78.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)        | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.0  | 2.0   | 2.0  | 2.0   |
| Lead/Lag                |       |       |       |       |       |       | Lead | Lag   | Lead | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |      |       |      |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 0.2   | 3.0  | 0.2   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 0.2   | 3.0  | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None | C-Max | None | C-Max |
| Walk Time (s)           | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0  | 4.0   | 4.0  | 4.0   |
| Flash Dont Walk (s)     | 18.0  | 18.0  | 18.0  | 18.0  | 18.0  | 18.0  |      | 12.0  |      | 12.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     | 0     |      | 0     |      | 0     |
| 90th %ile Green (s)     | 31.5  | 31.5  | 31.5  | 31.5  | 31.5  | 31.5  | 4.0  | 78.0  | 4.0  | 78.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Max  | Coord | Max  | Coord |
| 70th %ile Green (s)     | 31.5  | 31.5  | 31.5  | 31.5  | 31.5  | 31.5  | 4.0  | 87.0  | 0.0  | 78.0  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Max  | Coord | Skip | Coord |
| 50th %ile Green (s)     | 31.5  | 31.5  | 31.5  | 31.5  | 31.5  | 31.5  | 4.0  | 87.0  | 0.0  | 78.0  |
| 50th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Max  | Coord | Skip | Coord |
| 30th %ile Green (s)     | 31.5  | 31.5  | 31.5  | 31.5  | 31.5  | 31.5  | 4.0  | 87.0  | 0.0  | 78.0  |
| 30th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Max  | Coord | Skip | Coord |
| 10th %ile Green (s)     | 31.5  | 31.5  | 31.5  | 31.5  | 31.5  | 31.5  | 0.0  | 87.0  | 0.0  | 87.0  |
| 10th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Skip | Coord | Skip | Coord |

**Intersection Summary**

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 53 (41%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
53: Beauregard St & Reading Ave

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|------|-------|-------|-------|------|-------|------|-------|-------|-------|------|
| Lane Configurations | ↔     | ↔    | ↔     | ↔     | ↔     | ↔    | ↔     | ↔    | ↔     | ↔     | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           | 0%    |      | 0%    |       | 0%    |      | 0%    |      | 0%    |       | 0%    |      |
| Storage Length (ft) | 0     |      | 100   | 0     |       | 150  | 165   |      | 0     | 175   |       | 0    |
| Storage Lanes       | 1     |      | 0     | 1     |       | 0    | 1     |      | 0     | 1     |       | 0    |
| Taper Length (ft)   | 50    |      |       | 50    |       |      | 50    |      |       | 50    |       |      |
| 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     | 0.98  |      | 0.98  |       | 0.98  |      | 1.00  |      | 1.00  |       | 1.00  |      |
| Frt                 | 0.859 |      | 0.868 |       | 0.998 |      | 0.995 |      | 0.995 |       | 0.995 |      |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (prot)   | 1770  | 1561 | 0     | 1770  | 1585  | 0    | 1770  | 3530 | 0     | 1770  | 3511  | 0    |
| Flt Permitted       | 0.697 |      |       | 0.705 |       |      | 0.533 |      |       | 0.284 |       |      |
| Satd. Flow (perm)   | 1298  | 1561 | 0     | 1313  | 1585  | 0    | 993   | 3530 | 0     | 529   | 3511  | 0    |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |       |      | Yes   |       |       | Yes  |
| Satd. Flow (RTOR)   |       | 75   |       |       | 81    |      |       | 2    |       |       | 5     |      |
| Link Speed (mph)    | 25    |      | 25    |       | 25    |      | 35    |      | 35    |       | 35    |      |
| Link Distance (ft)  | 602   |      | 584   |       | 927   |      | 713   |      | 713   |       | 713   |      |
| Travel Time (s)     | 16.4  |      | 15.9  |       | 18.1  |      | 13.9  |      | 13.9  |       | 13.9  |      |

Intersection Summary

Area Type: Other

Timings  
53: Beauregard St & Reading Ave

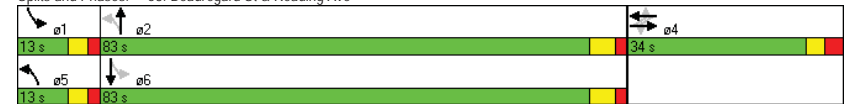
2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 130   | 5     | 25    | 10    | 170   | 875   | 20    | 280   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 4     |       | 4     |       | 5     |       | 6     |       |
| Permitted Phases     | 4     |       | 4     |       | 5     |       | 6     |       |
| Detector Phase       | 4     |       | 4     |       | 5     |       | 6     |       |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 8.0   | 8.0   | 8.0   | 8.0   | 6.0   | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)    | 31.0  | 31.0  | 31.0  | 31.0  | 11.0  | 24.0  | 11.0  | 24.0  |
| Total Split (s)      | 34.0  | 34.0  | 34.0  | 34.0  | 13.0  | 83.0  | 13.0  | 83.0  |
| Total Split (%)      | 26.2% | 26.2% | 26.2% | 26.2% | 10.0% | 63.8% | 10.0% | 63.8% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  | 19.2  | 19.2  | 19.2  | 19.2  | 98.7  | 92.1  | 92.5  | 85.3  |
| Actuated g/C Ratio   | 0.15  | 0.15  | 0.15  | 0.15  | 0.76  | 0.71  | 0.71  | 0.66  |
| v/c Ratio            | 0.73  | 0.27  | 0.14  | 0.30  | 0.23  | 0.38  | 0.05  | 0.14  |
| Control Delay        | 73.5  | 13.2  | 46.8  | 14.4  | 1.9   | 2.2   | 3.8   | 6.8   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 73.5  | 13.2  | 46.8  | 14.4  | 1.9   | 2.2   | 3.8   | 6.8   |
| LOS                  | E     | B     | D     | B     | A     | A     | A     | A     |
| Approach Delay       | 51.5  |       | 21.8  |       | 2.2   |       | 6.6   |       |
| Approach LOS         | D     |       | C     |       | A     |       | A     |       |

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 39 (30%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.73  
 Intersection Signal Delay: 10.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 59.4%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 53: Beauregard St & Reading Ave





Phasings  
53: Beauregard St & Reading Ave

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |  |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Protected Phases        |       | 4     |       | 4     | 5     | 2     | 1     | 6     |  |
| Permitted Phases        | 4     |       | 4     |       | 2     |       | 6     |       |  |
| Minimum Initial (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 6.0   | 10.0  | 6.0   | 10.0  |  |
| Minimum Split (s)       | 31.0  | 31.0  | 31.0  | 31.0  | 11.0  | 24.0  | 11.0  | 24.0  |  |
| Total Split (s)         | 34.0  | 34.0  | 34.0  | 34.0  | 13.0  | 83.0  | 13.0  | 83.0  |  |
| Total Split (%)         | 26.2% | 26.2% | 26.2% | 26.2% | 10.0% | 63.8% | 10.0% | 63.8% |  |
| Maximum Green (s)       | 28.0  | 28.0  | 28.0  | 28.0  | 8.0   | 77.0  | 8.0   | 77.0  |  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |  |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |  |
| Lead/Lag                |       |       |       |       | Lead  | Lag   | Lead  | Lag   |  |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |  |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |  |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |  |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Recall Mode             | None  | None  | None  | None  | None  | C-Max | None  | C-Max |  |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   |       | 7.0   |       | 7.0   |  |
| Flash Dont Walk (s)     | 18.0  | 18.0  | 18.0  | 18.0  |       | 8.0   |       | 8.0   |  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     |       | 0     |       | 0     |  |
| 90th %ile Green (s)     | 27.2  | 27.2  | 27.2  | 27.2  | 8.8   | 79.1  | 6.7   | 77.0  |  |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Max   | Coord | Gap   | Coord |  |
| 70th %ile Green (s)     | 22.8  | 22.8  | 22.8  | 22.8  | 10.2  | 84.1  | 6.1   | 80.0  |  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Coord | Coord | Gap   | Coord |  |
| 50th %ile Green (s)     | 18.9  | 18.9  | 18.9  | 18.9  | 8.9   | 88.1  | 6.0   | 85.2  |  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Coord | Coord | Min   | Coord |  |
| 30th %ile Green (s)     | 15.7  | 15.7  | 15.7  | 15.7  | 7.9   | 102.3 | 0.0   | 89.4  |  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Coord | Skip  | Skip  | Coord |  |
| 10th %ile Green (s)     | 11.2  | 11.2  | 11.2  | 11.2  | 6.7   | 106.8 | 0.0   | 95.1  |  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Coord | Skip  | Skip  | Coord |  |

**Intersection Summary**  
 Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 39 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
54: Beauregard St & N Morgan St

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL   | EBT   | EBR  | WBL  | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT   | SBR   |
|---------------------|-------|-------|------|------|-------|------|-------|-------|------|-------|-------|-------|
| Lane Configurations |       |       |      |      |       |      |       |       |      |       |       |       |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  |
| Lane Width (ft)     | 12    | 12    | 12   | 12   | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12    |
| Grade (%)           |       | 0%    |      |      | 0%    |      |       | 0%    |      |       | 0%    |       |
| Storage Length (ft) | 0     |       | 175  | 0    |       | 0    | 115   |       | 0    | 115   |       | 0     |
| Storage Lanes       | 1     |       | 1    | 0    |       | 0    | 1     |       | 0    | 1     |       | 0     |
| Taper Length (ft)   | 50    |       |      | 50   |       |      | 50    |       |      | 50    |       |       |
| 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     | 0.97  |       |      | 0.99 |       |      | 1.00  |       |      | 0.99  |       | 0.99  |
| Frt                 |       | 0.850 |      |      | 0.932 |      |       | 0.998 |      |       |       | 0.974 |
| Flt Protected       | 0.950 |       |      |      | 0.976 |      | 0.950 |       |      |       | 0.950 |       |
| Satd. Flow (prot)   | 1770  | 1543  | 0    | 0    | 1681  | 0    | 1770  | 3530  | 0    | 1770  | 3425  | 0     |
| Flt Permitted       | 0.705 |       |      |      | 0.831 |      | 0.404 |       |      | 0.177 |       |       |
| Satd. Flow (perm)   | 1313  | 1543  | 0    | 0    | 1431  | 0    | 753   | 3530  | 0    | 330   | 3425  | 0     |
| Right Turn on Red   |       |       | Yes  |      |       | Yes  |       |       | Yes  |       |       | Yes   |
| Satd. Flow (RTOR)   |       | 313   |      |      | 75    |      |       | 2     |      |       | 41    |       |
| Link Speed (mph)    |       | 25    |      |      | 25    |      |       | 35    |      |       | 35    |       |
| Link Distance (ft)  |       | 775   |      |      | 737   |      |       | 1035  |      |       | 958   |       |
| Travel Time (s)     |       | 21.1  |      |      | 20.1  |      |       | 20.2  |      |       | 18.7  |       |

**Intersection Summary**  
 Area Type: Other

Timings  
54: Beauregard St & N Morgan St

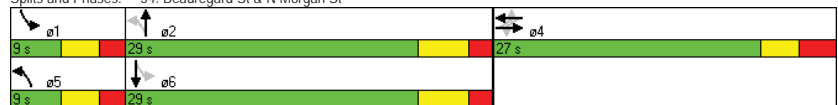
2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Volume (vph)         | 145   | 0     | 70    | 0     | 5     | 1045  | 60    | 440   |
| 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)  | 8.0   | 8.0   | 8.0   | 8.0   | 4.0   | 15.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 27.0  | 27.0  | 27.0  | 27.0  | 9.0   | 21.0  | 9.0   | 21.0  |
| Total Split (s)      | 27.0  | 27.0  | 27.0  | 27.0  | 9.0   | 29.0  | 9.0   | 29.0  |
| Total Split (%)      | 41.5% | 41.5% | 41.5% | 41.5% | 13.8% | 44.6% | 13.8% | 44.6% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | Max   | C-Max | None  | C-Max |
| Act Effct Green (s)  | 13.5  | 13.5  |       | 13.5  | 37.5  | 34.1  | 35.5  | 30.5  |
| Actuated g/C Ratio   | 0.21  | 0.21  |       | 0.21  | 0.58  | 0.52  | 0.55  | 0.47  |
| v/c Ratio            | 0.57  | 0.04  |       | 0.42  | 0.01  | 0.62  | 0.24  | 0.35  |
| Control Delay        | 30.4  | 0.2   |       | 14.6  | 3.0   | 9.3   | 6.5   | 8.8   |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 30.4  | 0.2   |       | 14.6  | 3.0   | 9.3   | 6.5   | 8.8   |
| LOS                  | C     | A     |       | B     | A     | A     | A     | A     |
| Approach Delay       |       | 26.7  |       | 14.6  |       | 9.3   |       | 8.6   |
| Approach LOS         |       | C     |       | B     |       | A     |       | A     |

Intersection Summary

Cycle Length: 65  
 Actuated Cycle Length: 65  
 Offset: 9 (14%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.62  
 Intersection Signal Delay: 10.9  
 Intersection LOS: B  
 Intersection Capacity Utilization 62.4%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 54: Beauregard St & N Morgan St



Phasings  
54: Beauregard St & N Morgan St

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 4     |       | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases        | 4     |       | 4     |       | 2     |       | 6     |       |
| Minimum Initial (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 4.0   | 15.0  | 4.0   | 10.0  |
| Minimum Split (s)       | 27.0  | 27.0  | 27.0  | 27.0  | 9.0   | 21.0  | 9.0   | 21.0  |
| Total Split (s)         | 27.0  | 27.0  | 27.0  | 27.0  | 9.0   | 29.0  | 9.0   | 29.0  |
| Total Split (%)         | 41.5% | 41.5% | 41.5% | 41.5% | 13.8% | 44.6% | 13.8% | 44.6% |
| Maximum Green (s)       | 21.0  | 21.0  | 21.0  | 21.0  | 4.0   | 23.0  | 4.0   | 23.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 4.0   | 2.0   | 4.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | Max   | C-Max | None  | C-Max |
| Walk Time (s)           | 4.0   | 4.0   | 4.0   | 4.0   |       | 7.0   |       | 7.0   |
| Flash Dont Walk (s)     | 17.0  | 17.0  | 17.0  | 17.0  |       | 8.0   |       | 8.0   |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     |       | 0     |       | 0     |
| 90th %ile Green (s)     | 20.0  | 20.0  | 20.0  | 20.0  | 4.0   | 24.0  | 4.0   | 24.0  |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | MaxR  | Coord | Max   | Coord |
| 70th %ile Green (s)     | 16.1  | 16.1  | 16.1  | 16.1  | 4.0   | 27.9  | 4.0   | 27.9  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | MaxR  | Coord | Max   | Coord |
| 50th %ile Green (s)     | 12.9  | 12.9  | 12.9  | 12.9  | 4.0   | 31.1  | 4.0   | 31.1  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | MaxR  | Coord | Max   | Coord |
| 30th %ile Green (s)     | 10.6  | 10.6  | 10.6  | 10.6  | 4.0   | 42.4  | 0.0   | 33.4  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | MaxR  | Coord | Skip  | Coord |
| 10th %ile Green (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 4.0   | 45.0  | 0.0   | 36.0  |
| 10th %ile Term Code     | Min   | Min   | Min   | Min   | MaxR  | Coord | Skip  | Coord |

Intersection Summary

Cycle Length: 65  
 Actuated Cycle Length: 65  
 Offset: 9 (14%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
55: Beauregard St & N Armistead St

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT   | WBR  | NBL   | NBT  | NBR   | SBL   | SBT  | SBR   |
|---------------------|------|-------|-------|------|-------|------|-------|------|-------|-------|------|-------|
| Lane Configurations |      | ↔     | ↔     |      | ↔     | ↔    | ↔     | ↔    |       | ↔     | ↔    |       |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12    |
| Grade (%)           |      | 0%    |       |      | 0%    |      |       | 0%   |       |       | 0%   |       |
| Storage Length (ft) | 0    |       | 50    | 0    |       | 50   | 90    |      | 0     | 80    |      | 0     |
| Storage Lanes       | 0    |       | 1     | 0    |       | 1    |       |      | 0     | 1     |      | 0     |
| Taper Length (ft)   | 50   |       |       | 50   |       |      | 50    |      |       | 50    |      |       |
| 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     |      |       |       |      |       |      |       | 0.98 | 1.00  |       |      | 1.00  |
| Frt                 |      |       | 0.850 |      |       |      | 0.850 |      | 0.996 |       |      | 0.996 |
| Flt Protected       |      | 0.950 |       |      | 0.950 |      | 0.950 |      |       | 0.950 |      |       |
| Satd. Flow (prot)   | 0    | 1770  | 1583  | 0    | 1770  | 1583 | 1770  | 3521 | 0     | 1770  | 3523 | 0     |
| Flt Permitted       |      | 0.550 |       |      | 0.732 |      | 0.496 |      |       | 0.284 |      |       |
| Satd. Flow (perm)   | 0    | 1025  | 1583  | 0    | 1364  | 1554 | 924   | 3521 | 0     | 529   | 3523 | 0     |
| Right Turn on Red   |      |       | Yes   |      |       | Yes  |       |      | Yes   |       |      | Yes   |
| Satd. Flow (RTOR)   |      |       | 22    |      |       | 213  |       | 3    |       |       | 3    |       |
| Link Speed (mph)    |      | 25    |       |      | 25    |      |       | 35   |       |       | 35   |       |
| Link Distance (ft)  |      | 620   |       |      | 778   |      |       | 1020 |       |       | 1035 |       |
| Travel Time (s)     |      | 16.9  |       |      | 21.2  |      |       | 19.9 |       |       | 20.2 |       |

Intersection Summary

Area Type: Other

Timings  
55: Beauregard St & N Armistead St

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       | ↔     | ↔     |       | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 35    | 0     | 20    | 140   | 0     | 275   | 5     | 755   | 120   | 400   |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | Perm  | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     |       | 4     |       |       | 4     |       | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 4     | 4     |       | 4     | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 5.0   | 12.0  | 5.0   | 12.0  |
| Minimum Split (s)    | 36.5  | 36.5  | 36.5  | 36.5  | 36.5  | 36.5  | 10.0  | 22.0  | 10.0  | 22.0  |
| Total Split (s)      | 44.0  | 44.0  | 44.0  | 44.0  | 44.0  | 44.0  | 10.0  | 69.0  | 17.0  | 76.0  |
| Total Split (%)      | 33.8% | 33.8% | 33.8% | 33.8% | 33.8% | 33.8% | 7.7%  | 53.1% | 13.1% | 58.5% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  |       | 20.8  | 20.8  |       | 20.8  | 20.8  | 89.5  | 83.5  | 97.7  | 94.7  |
| Actuated g/C Ratio   |       | 0.16  | 0.16  |       | 0.16  | 0.16  | 0.69  | 0.64  | 0.75  | 0.73  |
| v/c Ratio            |       | 0.23  | 0.08  |       | 0.69  | 0.69  | 0.01  | 0.37  | 0.27  | 0.17  |
| Control Delay        |       | 48.0  | 15.7  |       | 66.9  | 23.1  | 5.2   | 9.6   | 4.6   | 5.4   |
| Queue Delay          |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          |       | 48.0  | 15.7  |       | 66.9  | 23.1  | 5.2   | 9.6   | 4.6   | 5.4   |
| LOS                  |       | D     | B     |       | E     | C     | A     | A     | A     | A     |
| Approach Delay       |       | 36.2  |       |       | 37.9  |       |       | 9.6   |       | 5.2   |
| Approach LOS         |       | D     |       |       | D     |       |       | A     |       | A     |

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 127 (98%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.69  
 Intersection Signal Delay: 15.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 61.9%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 55: Beauregard St & N Armistead St



Phasings  
55: Beauregard St & N Armistead St

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|
| Protected Phases        |       | 4     |       |       | 4     |       | 5    | 2     | 1     | 6     |
| Permitted Phases        | 4     |       | 4     | 4     |       | 4     | 2    |       | 6     |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 5.0  | 12.0  | 5.0   | 12.0  |
| Minimum Split (s)       | 36.5  | 36.5  | 36.5  | 36.5  | 36.5  | 36.5  | 10.0 | 22.0  | 10.0  | 22.0  |
| Total Split (s)         | 44.0  | 44.0  | 44.0  | 44.0  | 44.0  | 44.0  | 10.0 | 69.0  | 17.0  | 76.0  |
| Total Split (%)         | 33.8% | 33.8% | 33.8% | 33.8% | 33.8% | 33.8% | 7.7% | 53.1% | 13.1% | 58.5% |
| Maximum Green (s)       | 37.5  | 37.5  | 37.5  | 37.5  | 37.5  | 37.5  | 5.0  | 63.0  | 12.0  | 70.0  |
| Yellow Time (s)         | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.0  | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0  | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       |       |       | Lead | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |      |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2  | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None | C-Max | None  | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |      | 4.0   |       | 4.0   |
| Flash Dont Walk (s)     | 23.0  | 23.0  | 23.0  | 23.0  | 23.0  | 23.0  |      | 12.0  |       | 12.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     | 0     |      | 0     |       | 0     |
| 90th %ile Green (s)     | 30.1  | 30.1  | 30.1  | 30.1  | 30.1  | 30.1  | 5.0  | 71.5  | 10.9  | 77.4  |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Max  | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 24.7  | 24.7  | 24.7  | 24.7  | 24.7  | 24.7  | 0.0  | 78.8  | 9.0   | 92.8  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Skip | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 20.7  | 20.7  | 20.7  | 20.7  | 20.7  | 20.7  | 0.0  | 83.8  | 8.0   | 96.8  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Skip | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 16.5  | 16.5  | 16.5  | 16.5  | 16.5  | 16.5  | 0.0  | 88.9  | 7.1   | 101.0 |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Skip | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 11.9  | 11.9  | 11.9  | 11.9  | 11.9  | 11.9  | 0.0  | 94.4  | 6.2   | 105.6 |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Skip | Coord | Gap   | Coord |

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 127 (98%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
56: Beauregard St & Quantrell Ave

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | WBL   | WBR   | NBT  | NBR   | SBL   | SBT  |
|---------------------|-------|-------|------|-------|-------|------|
| Lane Configurations |       |       |      |       |       |      |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           | 0%    |       | 0%   |       |       | 0%   |
| Storage Length (ft) | 0     | 50    |      | 85    | 100   |      |
| Storage Lanes       | 1     | 1     |      | 1     | 1     |      |
| Taper Length (ft)   | 50    |       |      |       | 50    |      |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95 | 1.00  | 1.00  | 0.95 |
| Ped Bike Factor     | 0.98  |       |      |       |       |      |
| Frt                 |       | 0.850 |      | 0.850 |       |      |
| Flt Protected       | 0.950 |       |      |       | 0.950 |      |
| Satd. Flow (prot)   | 1770  | 1583  | 3539 | 1583  | 1770  | 3539 |
| Flt Permitted       | 0.950 |       |      |       | 0.376 |      |
| Satd. Flow (perm)   | 1737  | 1583  | 3539 | 1583  | 700   | 3539 |
| Right Turn on Red   |       | Yes   |      | Yes   |       |      |
| Satd. Flow (RTOR)   |       | 119   |      | 38    |       |      |
| Link Speed (mph)    | 30    |       | 35   |       | 35    |      |
| Link Distance (ft)  | 751   |       | 931  |       | 1020  |      |
| Travel Time (s)     | 17.1  |       | 18.1 |       | 19.9  |      |

Intersection Summary

Area Type: Other

Timings  
56: Beauregard St & Quantrell Ave

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↑↑    | ↔     | ↔     | ↑↑    |
| Volume (vph)         | 240   | 125   | 655   | 35    | 40    | 520   |
| Turn Type            | NA    | Perm  | NA    | Perm  | Perm  | NA    |
| Protected Phases     | 4     |       | 2     |       |       | 2     |
| Permitted Phases     |       | 4     |       | 2     | 2     |       |
| Detector Phase       | 4     | 4     | 2     | 2     | 2     | 2     |
| Switch Phase         |       |       |       |       |       |       |
| Minimum Initial (s)  | 6.0   | 6.0   | 10.0  | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)    | 12.0  | 12.0  | 16.0  | 16.0  | 16.0  | 16.0  |
| Total Split (s)      | 24.0  | 24.0  | 41.0  | 41.0  | 41.0  | 41.0  |
| Total Split (%)      | 36.9% | 36.9% | 63.1% | 63.1% | 63.1% | 63.1% |
| Yellow Time (s)      | 3.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |
| Recall Mode          | None  | None  | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s)  | 14.2  | 14.2  | 38.8  | 38.8  | 38.8  | 38.8  |
| Actuated g/C Ratio   | 0.22  | 0.22  | 0.60  | 0.60  | 0.60  | 0.60  |
| v/c Ratio            | 0.67  | 0.31  | 0.33  | 0.04  | 0.10  | 0.26  |
| Control Delay        | 31.5  | 7.4   | 7.7   | 2.8   | 6.1   | 5.4   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 31.5  | 7.4   | 7.7   | 2.8   | 6.1   | 5.4   |
| LOS                  | C     | A     | A     | A     | A     | A     |
| Approach Delay       | 23.3  |       | 7.5   |       |       | 5.4   |
| Approach LOS         | C     |       | A     |       |       | A     |

Intersection Summary

Cycle Length: 65  
 Actuated Cycle Length: 65  
 Offset: 24 (37%), Referenced to phase 2:NBSB, Start of Green  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.67  
 Intersection Signal Delay: 10.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 54.7%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 56: Beauregard St & Quantrell Ave



Phasings  
56: Beauregard St & Quantrell Ave

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group              | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 4     |       | 2     |       |       | 2     |
| Permitted Phases        |       | 4     |       | 2     | 2     |       |
| Minimum Initial (s)     | 6.0   | 6.0   | 10.0  | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 12.0  | 12.0  | 16.0  | 16.0  | 16.0  | 16.0  |
| Total Split (s)         | 24.0  | 24.0  | 41.0  | 41.0  | 41.0  | 41.0  |
| Total Split (%)         | 36.9% | 36.9% | 63.1% | 63.1% | 63.1% | 63.1% |
| Maximum Green (s)       | 18.0  | 18.0  | 35.0  | 35.0  | 35.0  | 35.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s)           |       |       |       |       |       |       |
| Flash Dont Walk (s)     |       |       |       |       |       |       |
| Pedestrian Calls (#/hr) |       |       |       |       |       |       |
| 90th %ile Green (s)     | 18.0  | 18.0  | 35.0  | 35.0  | 35.0  | 35.0  |
| 90th %ile Term Code     | Max   | Max   | Coord | Coord | Coord | Coord |
| 70th %ile Green (s)     | 16.8  | 16.8  | 36.2  | 36.2  | 36.2  | 36.2  |
| 70th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 50th %ile Green (s)     | 14.6  | 14.6  | 38.4  | 38.4  | 38.4  | 38.4  |
| 50th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 30th %ile Green (s)     | 12.4  | 12.4  | 40.6  | 40.6  | 40.6  | 40.6  |
| 30th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 10th %ile Green (s)     | 9.2   | 9.2   | 43.8  | 43.8  | 43.8  | 43.8  |
| 10th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord | Coord |

Intersection Summary

Cycle Length: 65  
 Actuated Cycle Length: 65  
 Offset: 24 (37%), Referenced to phase 2:NBSB, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics 2035 Market with Traffic Mitigation  
AM PEAK  
58: Lincoln Rd/Gloucester Rd & Beauregard St

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT  | WBR   | NBL  | NBT   | NBR  | SBL  | SBT   | SBR  |
|---------------------|-------|------|------|-------|------|-------|------|-------|------|------|-------|------|
| Lane Configurations | ↔     | ↕    | ↔    | ↔     | ↕    | ↔     | ↔    | ↕     | ↔    | ↔    | ↕     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12   | 12    | 12   | 12    | 12   | 12   | 12    | 12   |
| Grade (%)           | 0%    |      | 0%   |       | 0%   |       | 0%   |       | 0%   |      | 0%    |      |
| Storage Length (ft) | 175   |      | 0    | 175   |      | 0     | 0    |       | 0    | 0    |       | 0    |
| Storage Lanes       | 1     |      | 0    | 1     |      | 0     | 0    |       | 1    | 0    |       | 0    |
| Taper Length (ft)   | 50    |      |      | 50    |      |       | 50   |       | 50   |      |       | 50   |
| 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 |
| Ped Bike Factor     | 0.99  |      |      |       |      | 0.99  |      |       |      |      | 0.865 |      |
| Frt                 | 0.968 |      |      |       |      | 0.850 |      |       |      |      | 0.865 |      |
| Flt Protected       | 0.950 |      |      | 0.950 |      |       |      | 0.950 |      |      |       |      |
| Satd. Flow (prot)   | 1770  | 3402 | 0    | 1770  | 3539 | 0     | 0    | 1770  | 1583 | 0    | 1611  | 0    |
| Flt Permitted       | 0.321 |      |      | 0.210 |      |       |      | 0.750 |      |      |       |      |
| Satd. Flow (perm)   | 598   | 3402 | 0    | 391   | 3539 | 0     | 0    | 1397  | 1560 | 0    | 1611  | 0    |
| Right Turn on Red   |       |      | Yes  |       |      | Yes   |      |       | Yes  |      |       | Yes  |
| Satd. Flow (RTOR)   | 41    |      |      | 35    |      |       | 65   |       |      | 216  |       |      |
| Link Speed (mph)    | 35    |      |      | 35    |      |       | 35   |       |      | 30   |       |      |
| Link Distance (ft)  | 545   |      |      | 931   |      |       | 614  |       |      | 831  |       |      |
| Travel Time (s)     | 10.6  |      |      | 18.1  |      |       | 12.0 |       |      | 18.9 |       |      |

Intersection Summary

Area Type: Other

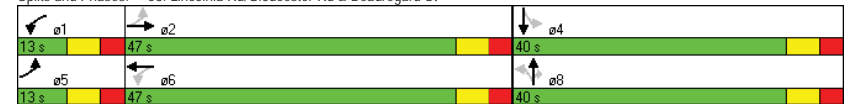
Timings 2035 Market with Traffic Mitigation  
AM PEAK  
58: Lincoln Rd/Gloucester Rd & Beauregard St

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↕     | ↕     |
| Volume (vph)         | 5     | 630   | 50    | 710   | 365   | 0     | 60    | 0     |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     |       | 8     |       | 4     |
| Permitted Phases     | 2     |       | 6     |       | 8     |       | 8     |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 8     | 8     | 8     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 13.0  | 17.0  | 13.0  | 17.0  | 15.0  | 15.0  | 15.0  | 15.0  |
| Total Split (s)      | 13.0  | 47.0  | 13.0  | 47.0  | 40.0  | 40.0  | 40.0  | 40.0  |
| Total Split (%)      | 13.0% | 47.0% | 13.0% | 47.0% | 40.0% | 40.0% | 40.0% | 40.0% |
| Yellow Time (s)      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | None  | None  | None  |
| Act Effct Green (s)  | 47.6  | 43.0  | 52.3  | 51.1  |       | 32.3  | 32.3  | 32.3  |
| Actuated g/C Ratio   | 0.48  | 0.43  | 0.52  | 0.51  |       | 0.32  | 0.32  | 0.32  |
| v/c Ratio            | 0.01  | 0.58  | 0.19  | 0.42  |       | 0.87  | 0.12  | 0.02  |
| Control Delay        | 8.8   | 17.4  | 14.1  | 17.7  |       | 52.0  | 6.2   | 0.0   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Total Delay          | 8.8   | 17.4  | 14.1  | 17.7  |       | 52.0  | 6.2   | 0.0   |
| LOS                  | A     | B     | B     | B     |       | D     | A     | A     |
| Approach Delay       | 17.4  |       | 17.5  |       | 45.5  |       | 0.0   |       |
| Approach LOS         | B     |       | B     |       | D     |       | A     |       |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 84 (84%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.87  
 Intersection Signal Delay: 23.3 Intersection LOS: C  
 Intersection Capacity Utilization 70.7% ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 58: Lincoln Rd/Gloucester Rd & Beauregard St



Phasings 2035 Market with Traffic Mitigation  
 58: Lincoln Rd/Gloucester Rd & Beauregard St AM PEAK

|                         | ↖     | →     | ↗     | ←     | ↙     | ↑     | ↘     | ↓     |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBT   |
| Protected Phases        | 5     | 2     | 1     | 6     |       | 8     |       | 4     |
| Permitted Phases        | 2     |       | 6     |       | 8     |       | 8     |       |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 13.0  | 17.0  | 13.0  | 17.0  | 15.0  | 15.0  | 15.0  | 15.0  |
| Total Split (s)         | 13.0  | 47.0  | 13.0  | 47.0  | 40.0  | 40.0  | 40.0  | 40.0  |
| Total Split (%)         | 13.0% | 47.0% | 13.0% | 47.0% | 40.0% | 40.0% | 40.0% | 40.0% |
| Maximum Green (s)       | 6.0   | 40.0  | 6.0   | 40.0  | 33.0  | 33.0  | 33.0  | 33.0  |
| Yellow Time (s)         | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | C-Min | None  | C-Min | None  | None  | None  | None  |
| Walk Time (s)           |       | 7.0   |       | 7.0   |       | 7.0   |       | 7.0   |
| Flash Dont Walk (s)     |       | 19.0  |       | 23.0  |       | 23.0  |       | 22.0  |
| Pedestrian Calls (#/hr) |       | 0     |       | 0     |       | 0     |       | 0     |
| 90th %ile Green (s)     | 6.0   | 38.7  | 6.0   | 38.7  | 34.3  | 34.3  | 34.3  | 34.3  |
| 90th %ile Term Code     | Max   | Coord | Max   | Coord | Max   | Max   | Max   | Hold  |
| 70th %ile Green (s)     | 0.0   | 34.8  | 6.1   | 47.9  | 38.1  | 38.1  | 38.1  | 38.1  |
| 70th %ile Term Code     | Skip  | Coord | Max   | Coord | Gap   | Gap   | Gap   | Hold  |
| 50th %ile Green (s)     | 0.0   | 37.7  | 7.0   | 51.7  | 34.3  | 34.3  | 34.3  | 34.3  |
| 50th %ile Term Code     | Skip  | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Hold  |
| 30th %ile Green (s)     | 0.0   | 42.3  | 6.2   | 55.5  | 30.5  | 30.5  | 30.5  | 30.5  |
| 30th %ile Term Code     | Skip  | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Hold  |
| 10th %ile Green (s)     | 0.0   | 61.7  | 0.0   | 61.7  | 24.3  | 24.3  | 24.3  | 24.3  |
| 10th %ile Term Code     | Skip  | Coord | Skip  | Coord | Gap   | Gap   | Gap   | Hold  |

**Intersection Summary**  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 84 (84%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics 2035 Market with Traffic Mitigation  
 59: Beauregard St & N Chambliss St/Plaza at Landmark AM PEAK

|                     | ↖     | →    | ↗     | ↖     | ←     | ↙    | ↑     | ↘    | ↓     | ↙     |       |      |
|---------------------|-------|------|-------|-------|-------|------|-------|------|-------|-------|-------|------|
| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
| Lane Configurations | ↖     | ↖    | ↖     | ↖     | ↖     | ↖    | ↖     | ↖    | ↖     | ↖     | ↖     | ↖    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           |       | 0%   |       |       | 0%    |      |       | 0%   |       |       | 0%    |      |
| Storage Length (ft) | 0     |      | 75    | 0     |       | 0    | 200   |      | 140   | 170   |       | 0    |
| Storage Lanes       | 1     |      | 1     | 1     |       | 0    | 1     |      | 1     | 1     |       | 0    |
| Taper Length (ft)   | 50    |      |       | 50    |       |      | 50    |      |       | 50    |       |      |
| Lane Util. Factor   | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 0.95 |
| Ped Bike Factor     |       |      |       |       | 0.99  |      |       |      | 0.98  |       |       |      |
| Frt                 |       |      | 0.850 |       | 0.917 |      |       |      | 0.850 |       | 0.998 |      |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (prot)   | 1770  | 1863 | 1583  | 1770  | 1695  | 0    | 1770  | 3539 | 1583  | 1770  | 3532  | 0    |
| Flt Permitted       | 0.703 |      |       | 0.740 |       |      | 0.141 |      |       | 0.394 |       |      |
| Satd. Flow (perm)   | 1310  | 1863 | 1583  | 1378  | 1695  | 0    | 263   | 3539 | 1545  | 734   | 3532  | 0    |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |       |      | Yes   |       |       | Yes  |
| Satd. Flow (RTOR)   |       |      | 661   |       | 27    |      |       |      | 54    |       | 1     |      |
| Link Speed (mph)    |       | 30   |       |       | 25    |      |       | 25   |       |       | 35    |      |
| Link Distance (ft)  |       | 622  |       |       | 252   |      |       | 846  |       |       | 464   |      |
| Travel Time (s)     |       | 14.1 |       |       | 6.9   |      |       | 23.1 |       |       | 9.0   |      |

**Intersection Summary**  
 Area Type: Other

**Timings**  
**59: Beauregard St & N Chambliss St/Plaza at Landmark**

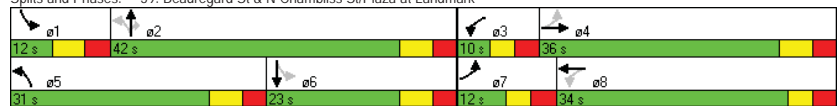
2035 Market with Traffic Mitigation  
 AM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↠ ↡ ↠ | ↠ ↡ ↠ | ↠ ↡ ↠ | ↠ ↡ ↠ | ↠ ↡ ↠ | ↠ ↡ ↠ | ↠ ↡ ↠ | ↠ ↡ ↠ | ↠ ↡ ↠ | ↠ ↡ ↠ |
| Volume (vph)         | 150   | 25    | 695   | 85    | 20    | 485   | 630   | 50    | 25    | 655   |
| Turn Type            | pm+pt | NA    | Free  | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     | 5     | 2     |       | 1     | 6     |
| Permitted Phases     | 4     |       | Free  | 8     |       | 2     |       | 2     |       | 6     |
| Detector Phase       | 7     | 4     |       | 3     | 8     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   |       | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 1.0   | 4.0   |
| Minimum Split (s)    | 10.0  | 36.0  |       | 10.0  | 22.0  | 12.0  | 22.0  | 22.0  | 12.0  | 22.0  |
| Total Split (s)      | 12.0  | 36.0  | 0.0   | 10.0  | 34.0  | 31.0  | 42.0  | 42.0  | 12.0  | 23.0  |
| Total Split (%)      | 12.0% | 36.0% | 0.0%  | 10.0% | 34.0% | 31.0% | 42.0% | 42.0% | 12.0% | 23.0% |
| Yellow Time (s)      | 3.0   | 4.0   |       | 3.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   |       | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -5.0  |
| Total Lost Time (s)  | 6.0   | 7.0   | 4.0   | 6.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 2.0   |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  |       | None  | None  | C-Min | C-Min | None  | C-Min |       |
| Act Effct Green (s)  | 12.2  | 7.8   | 100.0 | 11.6  | 7.1   | 70.1  | 62.7  | 62.7  | 36.4  | 36.4  |
| Actuated g/C Ratio   | 0.12  | 0.08  | 1.00  | 0.12  | 0.07  | 0.70  | 0.63  | 0.63  | 0.36  | 0.36  |
| v/c Ratio            | 0.86  | 0.18  | 0.47  | 0.49  | 0.34  | 0.79  | 0.31  | 0.05  | 0.08  | 0.56  |
| Control Delay        | 76.8  | 44.9  | 1.0   | 46.0  | 30.6  | 28.7  | 10.8  | 3.4   | 10.6  | 24.6  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 76.8  | 44.9  | 1.0   | 46.0  | 30.6  | 28.7  | 10.8  | 3.4   | 10.6  | 24.6  |
| LOS                  | E     | D     | A     | D     | C     | C     | B     | A     | B     | C     |
| Approach Delay       | 15.3  |       |       | 40.6  |       |       | 18.0  |       |       | 24.1  |
| Approach LOS         | B     |       |       | D     |       |       | B     |       |       | C     |

**Intersection Summary**

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 6 (6%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 19.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 75.3%  
 ICU Level of Service D  
 Analysis Period (min) 15

**Splits and Phases: 59: Beauregard St & N Chambliss St/Plaza at Landmark**



**Phasings**  
**59: Beauregard St & N Chambliss St/Plaza at Landmark**

2035 Market with Traffic Mitigation  
 AM PEAK

| Lane Group              | EBL   | EBT   | EBR  | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 7     | 4     |      | 3     | 8     | 5     | 2     |       | 1     | 6     |
| Permitted Phases        | 4     |       | Free | 8     |       | 2     |       | 2     |       | 6     |
| Minimum Initial (s)     | 4.0   | 4.0   |      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 1.0   | 4.0   |
| Minimum Split (s)       | 10.0  | 36.0  |      | 10.0  | 22.0  | 12.0  | 22.0  | 22.0  | 12.0  | 22.0  |
| Total Split (s)         | 12.0  | 36.0  | 0.0  | 10.0  | 34.0  | 31.0  | 42.0  | 42.0  | 12.0  | 23.0  |
| Total Split (%)         | 12.0% | 36.0% | 0.0% | 10.0% | 34.0% | 31.0% | 42.0% | 42.0% | 12.0% | 23.0% |
| Maximum Green (s)       | 6.0   | 29.0  |      | 4.0   | 28.0  | 24.0  | 35.0  | 35.0  | 5.0   | 16.0  |
| Yellow Time (s)         | 3.0   | 4.0   |      | 3.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   |      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   |      | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |      |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   |      | 3.0   | 3.0   | 2.0   | 4.0   | 4.0   | 2.0   | 4.0   |
| Minimum Gap (s)         | 3.0   | 3.0   |      | 3.0   | 3.0   | 2.0   | 4.0   | 4.0   | 2.0   | 4.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  |      | None  | None  | None  | C-Min | C-Min | None  | C-Min |
| Walk Time (s)           |       | 7.0   |      |       | 5.0   |       |       |       |       |       |
| Flash Dont Walk (s)     |       | 22.0  |      |       | 11.0  |       |       |       |       |       |
| Pedestrian Calls (#/hr) |       | 0     |      |       | 0     |       |       |       |       |       |
| 90th %ile Green (s)     | 6.0   | 10.9  |      | 4.0   | 9.9   | 35.8  | 52.3  | 52.3  | 5.8   | 22.3  |
| 90th %ile Term Code     | Max   | Hold  |      | Max   | Gap   | Gap   | Coord | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 6.0   | 9.0   |      | 4.0   | 8.0   | 32.4  | 54.7  | 54.7  | 5.3   | 27.6  |
| 70th %ile Term Code     | Max   | Hold  |      | Max   | Gap   | Gap   | Coord | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 6.0   | 7.7   |      | 4.0   | 6.7   | 31.1  | 56.4  | 56.4  | 4.9   | 30.2  |
| 50th %ile Term Code     | Max   | Hold  |      | Max   | Gap   | Gap   | Coord | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 6.0   | 0.0   |      | 17.5  | 5.5   | 30.4  | 69.5  | 69.5  | 0.0   | 32.1  |
| 30th %ile Term Code     | Max   | Skip  |      | Hold  | Gap   | Gap   | Coord | Coord | Skip  | Coord |
| 10th %ile Green (s)     | 6.5   | 5.5   |      | 0.0   | 0.0   | 28.8  | 80.5  | 80.5  | 0.0   | 44.7  |
| 10th %ile Term Code     | Hold  | Hold  |      | Skip  | Skip  | Gap   | Coord | Coord | Skip  | Coord |

**Intersection Summary**

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 6 (6%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated



Lanes and Geometrics

61: N Beauregard St/Beauregard St & Route 236

2035 Market with Traffic Mitigation

AM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|------|------|-------|-------|------|-------|------|-------|-------|-------|------|
| Lane Configurations | ↔↔    | ↔↔   | ↔    | ↔↔    | ↔↔    | ↔    | ↔     | ↔    | ↔     | ↔     | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           | 0%    |      | 0%   |       | 0%    |      | 0%    |      | 0%    |       | 0%    |      |
| Storage Length (ft) | 600   |      | 0    | 215   |       | 500  | 120   |      | 0     | 0     |       | 0    |
| Storage Lanes       | 2     |      | 0    | 1     |       | 1    |       |      | 1     | 1     |       | 1    |
| Taper Length (ft)   | 50    |      |      | 50    |       |      | 50    |      |       | 50    |       |      |
| Lane Util. Factor   | 0.97  | 0.91 | 0.91 | 1.00  | 0.91  | 1.00 | 1.00  | 1.00 | 1.00  | 0.95  | 0.95  | 1.00 |
| Ped Bike Factor     | 1.00  |      |      |       | 0.98  |      |       |      | 0.98  |       |       |      |
| Frt                 | 0.997 |      |      |       | 0.850 |      |       |      | 0.850 |       |       |      |
| Flt Protected       | 0.950 |      |      | 0.950 |       |      | 0.950 |      |       | 0.950 | 0.960 |      |
| Satd. Flow (prot)   | 3433  | 5065 | 0    | 1770  | 5085  | 1583 | 1770  | 1863 | 1583  | 1681  | 1699  | 1583 |
| Flt Permitted       | 0.950 |      |      | 0.950 |       |      | 0.950 |      |       | 0.950 | 0.960 |      |
| Satd. Flow (perm)   | 3433  | 5065 | 0    | 1770  | 5085  | 1550 | 1770  | 1863 | 1547  | 1681  | 1699  | 1540 |
| Right Turn on Red   |       |      | Yes  |       |       | Yes  |       |      | Yes   |       |       | Yes  |
| Satd. Flow (RTOR)   | 2     |      |      |       | 313   |      |       |      | 3     |       |       |      |
| Link Speed (mph)    | 40    |      |      |       | 40    |      |       |      | 25    |       |       |      |
| Link Distance (ft)  | 1126  |      |      |       | 1020  |      |       |      | 665   |       |       |      |
| Travel Time (s)     | 19.2  |      |      |       | 17.4  |      |       |      | 18.1  |       |       |      |

Intersection Summary

Area Type: Other

Timings

61: N Beauregard St/Beauregard St & Route 236

2035 Market with Traffic Mitigation

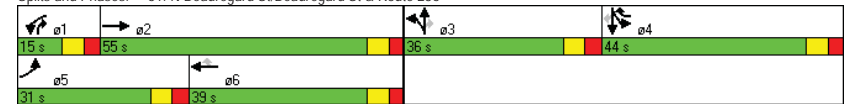
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔↔    | ↔↔    | ↔     | ↔↔    | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 535   | 1400  | 75    | 1150  | 520   | 115   | 110   | 75    | 1010  | 95    | 330   |
| Turn Type            | Prot  | NA    | Prot  | NA    | pm+ov | Split | NA    | pm+ov | Split | NA    | Perm  |
| Protected Phases     | 5     | 2     | 1     | 6     | 4     | 3     | 3     | 1     | 4     | 4     |       |
| Permitted Phases     |       |       |       |       | 6     |       |       | 3     |       |       | 4     |
| Detector Phase       | 5     | 2     | 1     | 6     | 4     | 3     | 3     | 1     | 4     | 4     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 8.0   | 20.0  | 8.0   | 20.0  | 8.0   | 4.0   | 4.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)    | 15.0  | 26.5  | 15.0  | 28.5  | 36.0  | 36.0  | 36.0  | 15.0  | 36.0  | 36.0  | 36.0  |
| Total Split (s)      | 31.0  | 55.0  | 15.0  | 39.0  | 44.0  | 36.0  | 36.0  | 15.0  | 44.0  | 44.0  | 44.0  |
| Total Split (%)      | 20.7% | 36.7% | 10.0% | 26.0% | 29.3% | 24.0% | 24.0% | 10.0% | 29.3% | 29.3% | 29.3% |
| Yellow Time (s)      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 2.5   | 3.0   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | -3.0  | -2.5  | -3.0  | -2.5  | -3.0  | -3.0  | -3.0  | -3.0  | -5.0  | -5.0  | -5.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lead  | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | None  | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 27.0  | 51.0  | 11.0  | 35.0  | 88.2  | 18.8  | 18.8  | 29.8  | 55.2  | 55.2  | 55.2  |
| Actuated g/C Ratio   | 0.18  | 0.34  | 0.07  | 0.23  | 0.59  | 0.13  | 0.13  | 0.20  | 0.37  | 0.37  | 0.37  |
| v/c Ratio            | 0.93  | 0.89  | 0.62  | 1.04  | 0.53  | 0.56  | 0.50  | 0.26  | 0.95  | 0.96  | 0.50  |
| Control Delay        | 82.9  | 54.5  | 88.4  | 92.6  | 5.9   | 70.6  | 67.9  | 25.9  | 71.5  | 74.5  | 17.0  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 82.9  | 54.5  | 88.4  | 92.6  | 5.9   | 70.6  | 67.9  | 25.9  | 71.5  | 74.5  | 17.0  |
| LOS                  | F     | D     | F     | F     | A     | E     | E     | C     | E     | E     | B     |
| Approach Delay       | 62.2  |       | 66.6  |       | 58.4  |       | 60.1  |       |       |       |       |
| Approach LOS         | E     |       | E     |       | E     |       | E     |       |       |       |       |

Intersection Summary

Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.04  
 Intersection Signal Delay: 62.9  
 Intersection LOS: E  
 Intersection Capacity Utilization 84.6%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 61: N Beauregard St/Beauregard St & Route 236



Phasings

61: N Beauregard St/Beauregard St & Route 236

2035 Market with Traffic Mitigation

AM PEAK



| Lane Group              | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 5     | 2     | 1     | 6     | 4     | 3     | 3     | 1     | 4     | 4     |       |
| Permitted Phases        |       |       |       |       | 6     |       |       | 3     |       |       | 4     |
| Minimum Initial (s)     | 8.0   | 20.0  | 8.0   | 20.0  | 8.0   | 4.0   | 4.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)       | 15.0  | 26.5  | 15.0  | 28.5  | 36.0  | 36.0  | 36.0  | 15.0  | 36.0  | 36.0  | 36.0  |
| Total Split (s)         | 31.0  | 55.0  | 15.0  | 39.0  | 44.0  | 36.0  | 36.0  | 15.0  | 44.0  | 44.0  | 44.0  |
| Total Split (%)         | 20.7% | 36.7% | 10.0% | 26.0% | 29.3% | 24.0% | 24.0% | 10.0% | 29.3% | 29.3% | 29.3% |
| Maximum Green (s)       | 24.0  | 48.5  | 8.0   | 32.5  | 37.0  | 29.0  | 29.0  | 8.0   | 37.0  | 37.0  | 37.0  |
| Yellow Time (s)         | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 2.5   | 3.0   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lead  | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | C-Min | None  | C-Min | None  | None  | None  | None  | None  | None  | None  |
| Walk Time (s)           |       |       |       | 7.0   | 7.0   | 7.0   | 7.0   |       | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |       |       | 14.0  | 22.0  | 22.0  | 22.0  |       | 22.0  | 22.0  | 22.0  |
| Pedestrian Calls (#/hr) |       |       |       | 0     | 0     | 0     | 0     |       | 0     | 0     | 0     |
| 90th %ile Green (s)     | 24.0  | 48.5  | 8.0   | 32.5  | 44.3  | 21.7  | 21.7  | 8.0   | 44.3  | 44.3  | 44.3  |
| 90th %ile Term Code     | Max   | Coord | Max   | Coord | Max   | Gap   | Gap   | Max   | Max   | Max   | Max   |
| 70th %ile Green (s)     | 24.0  | 48.5  | 8.0   | 32.5  | 47.7  | 18.3  | 18.3  | 8.0   | 47.7  | 47.7  | 47.7  |
| 70th %ile Term Code     | Max   | Coord | Max   | Coord | Max   | Gap   | Gap   | Max   | Max   | Max   | Max   |
| 50th %ile Green (s)     | 24.0  | 48.5  | 8.0   | 32.5  | 50.2  | 15.8  | 15.8  | 8.0   | 50.2  | 50.2  | 50.2  |
| 50th %ile Term Code     | Max   | Coord | Max   | Coord | Max   | Gap   | Gap   | Max   | Max   | Max   | Max   |
| 30th %ile Green (s)     | 24.0  | 48.5  | 8.0   | 32.5  | 52.6  | 13.4  | 13.4  | 8.0   | 52.6  | 52.6  | 52.6  |
| 30th %ile Term Code     | Max   | Coord | Max   | Coord | Max   | Gap   | Gap   | Max   | Max   | Max   | Max   |
| 10th %ile Green (s)     | 24.0  | 48.5  | 8.0   | 32.5  | 56.0  | 10.0  | 10.0  | 8.0   | 56.0  | 56.0  | 56.0  |
| 10th %ile Term Code     | Max   | Coord | Max   | Coord | Max   | Gap   | Gap   | Max   | Max   | Max   | Max   |

Intersection Summary

Cycle Length: 150

Actuated Cycle Length: 150

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

Control Type: Actuated-Coordinated

Lanes and Geometrics

67: Beauregard St & Lincolnia Rd Spur

2035 Market with Traffic Mitigation

AM PEAK



| Lane Group          | EBL  | EBT  | WBT   | WBR  | SBL  | SBR  |
|---------------------|------|------|-------|------|------|------|
| Lane Configurations |      | ↑↑   | ↑↑    |      |      |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           |      | 0%   | 0%    |      | 0%   |      |
| Storage Length (ft) |      | 0    |       | 0    | 0    | 0    |
| Storage Lanes       |      | 0    |       | 0    | 0    | 0    |
| Taper Length (ft)   |      | 50   |       |      | 50   |      |
| Lane Util. Factor   | 1.00 | 0.95 | 0.95  | 0.95 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      |       |      |      |      |
| Friction            |      |      | 0.945 |      |      |      |
| Friction Protected  |      |      |       |      |      |      |
| Satd. Flow (prot)   | 0    | 3539 | 3345  | 0    | 0    | 0    |
| Friction Permitted  |      |      |       |      |      |      |
| Satd. Flow (perm)   | 0    | 3539 | 3345  | 0    | 0    | 0    |
| Link Speed (mph)    |      | 35   | 35    |      | 25   |      |
| Link Distance (ft)  |      | 464  | 545   |      | 446  |      |
| Travel Time (s)     |      | 9.0  | 10.6  |      | 12.2 |      |

Intersection Summary

Area Type: Other

Lanes and Geometrics  
90: N Jordan St & Seminary Rd/ Seminary Rd

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBT   | EBR  | WBL  | WBT   | NBL   | NBR   |
|---------------------|-------|------|------|-------|-------|-------|
| Lane Configurations | ↔↔    |      | ↔    | ↔↔    | ↔     | ↔     |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900  |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12    |
| Grade (%)           | 0%    |      |      | 0%    | 0%    |       |
| Storage Length (ft) |       | 0    | 0    |       | 0     | 250   |
| Storage Lanes       |       | 0    | 0    |       | 1     | 1     |
| Taper Length (ft)   |       |      | 50   |       | 50    |       |
| Lane Util. Factor   | 0.95  | 0.95 | 0.95 | 0.95  | 1.00  | 1.00  |
| Ped Bike Factor     | 0.99  |      |      |       |       |       |
| Frt                 | 0.967 |      |      |       |       | 0.850 |
| Flt Protected       |       |      |      | 0.998 | 0.950 |       |
| Satd. Flow (prot)   | 3391  | 0    | 0    | 3532  | 1770  | 1583  |
| Flt Permitted       |       |      |      | 0.897 | 0.950 |       |
| Satd. Flow (perm)   | 3391  | 0    | 0    | 3175  | 1770  | 1583  |
| Right Turn on Red   |       | Yes  |      |       |       | Yes   |
| Satd. Flow (RTOR)   | 35    |      |      |       |       | 75    |
| Link Speed (mph)    | 35    |      |      | 35    | 25    |       |
| Link Distance (ft)  | 744   |      |      | 747   | 1357  |       |
| Travel Time (s)     | 14.5  |      |      | 14.6  | 37.0  |       |

Intersection Summary

Area Type: Other

Timings  
90: N Jordan St & Seminary Rd/ Seminary Rd

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBT   | WBL   | WBT   | NBL   | NBR   |
|----------------------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔↔    |       | ↔↔    | ↔     | ↔     |
| Volume (vph)         | 750   | 20    | 655   | 290   | 70    |
| Turn Type            | NA    | pm+pt | NA    | NA    | Perm  |
| Protected Phases     | 2     | 1     | 6     | 8     |       |
| Permitted Phases     |       | 6     |       |       | 8     |
| Detector Phase       | 2     | 1     | 6     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 10.0  | 6.0   | 16.0  | 6.0   | 6.0   |
| Minimum Split (s)    | 30.5  | 11.0  | 30.5  | 22.0  | 22.0  |
| Total Split (s)      | 53.0  | 11.0  | 64.0  | 56.0  | 56.0  |
| Total Split (%)      | 44.2% | 9.2%  | 53.3% | 46.7% | 46.7% |
| Yellow Time (s)      | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.5   | 2.0   | 2.5   | 3.0   | 3.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.5   | 5.0   | 6.5   | 6.0   | 6.0   |
| Lead/Lag             | Lag   | Lead  |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |
| Recall Mode          | C-Max | None  | C-Max | None  | None  |
| Act Effct Green (s)  | 80.3  |       | 80.3  | 27.2  | 27.2  |
| Actuated g/C Ratio   | 0.67  |       | 0.67  | 0.23  | 0.23  |
| v/c Ratio            | 0.45  |       | 0.34  | 0.78  | 0.18  |
| Control Delay        | 9.6   |       | 9.8   | 56.6  | 8.2   |
| Queue Delay          | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Total Delay          | 9.6   |       | 9.8   | 56.6  | 8.2   |
| LOS                  | A     |       | A     | E     | A     |
| Approach Delay       | 9.6   |       | 9.8   | 47.2  |       |
| Approach LOS         | A     |       | A     | D     |       |

|                      |       |      |       |       |       |
|----------------------|-------|------|-------|-------|-------|
| Minimum Initial (s)  | 10.0  | 6.0  | 16.0  | 6.0   | 6.0   |
| Minimum Split (s)    | 30.5  | 11.0 | 30.5  | 22.0  | 22.0  |
| Total Split (s)      | 53.0  | 11.0 | 64.0  | 56.0  | 56.0  |
| Total Split (%)      | 44.2% | 9.2% | 53.3% | 46.7% | 46.7% |
| Yellow Time (s)      | 4.0   | 3.0  | 4.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.5   | 2.0  | 2.5   | 3.0   | 3.0   |
| Lost Time Adjust (s) | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.5   | 5.0  | 6.5   | 6.0   | 6.0   |
| Lead/Lag             | Lag   | Lead |       |       |       |
| Lead-Lag Optimize?   |       |      |       |       |       |
| Recall Mode          | C-Max | None | C-Max | None  | None  |
| Act Effct Green (s)  | 80.3  |      | 80.3  | 27.2  | 27.2  |
| Actuated g/C Ratio   | 0.67  |      | 0.67  | 0.23  | 0.23  |
| v/c Ratio            | 0.45  |      | 0.34  | 0.78  | 0.18  |
| Control Delay        | 9.6   |      | 9.8   | 56.6  | 8.2   |
| Queue Delay          | 0.0   |      | 0.0   | 0.0   | 0.0   |
| Total Delay          | 9.6   |      | 9.8   | 56.6  | 8.2   |
| LOS                  | A     |      | A     | E     | A     |
| Approach Delay       | 9.6   |      | 9.8   | 47.2  |       |
| Approach LOS         | A     |      | A     | D     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 111 (93%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.78  
 Intersection Signal Delay: 16.4  
 Intersection LOS: B  
 Intersection Capacity Utilization 59.0%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 90: N Jordan St & Seminary Rd/ Seminary Rd



Phasings

90: N Jordan St & Seminary Rd/ Seminary Rd

2035 Market with Traffic Mitigation

AM PEAK

|                         | →     | ↖    | ←     | ↗     | ↘     |
|-------------------------|-------|------|-------|-------|-------|
| Lane Group              | EBT   | WBL  | WBT   | NBL   | NBR   |
| Protected Phases        | 2     | 1    | 6     | 8     |       |
| Permitted Phases        |       | 6    |       | 8     |       |
| Minimum Initial (s)     | 10.0  | 6.0  | 16.0  | 6.0   | 6.0   |
| Minimum Split (s)       | 30.5  | 11.0 | 30.5  | 22.0  | 22.0  |
| Total Split (s)         | 53.0  | 11.0 | 64.0  | 56.0  | 56.0  |
| Total Split (%)         | 44.2% | 9.2% | 53.3% | 46.7% | 46.7% |
| Maximum Green (s)       | 46.5  | 6.0  | 57.5  | 50.0  | 50.0  |
| Yellow Time (s)         | 4.0   | 3.0  | 4.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.5   | 2.0  | 2.5   | 3.0   | 3.0   |
| Lead/Lag                | Lag   | Lead |       |       |       |
| Lead-Lag Optimize?      |       |      |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Recall Mode             | C-Max | None | C-Max | None  | None  |
| Walk Time (s)           | 12.0  |      | 12.0  | 4.0   | 4.0   |
| Flash Dont Walk (s)     | 12.0  |      | 12.0  | 12.0  | 12.0  |
| Pedestrian Calls (#/hr) | 0     |      | 0     | 0     | 0     |
| 90th %ile Green (s)     | 71.5  | 0.0  | 71.5  | 36.0  | 36.0  |
| 90th %ile Term Code     | Coord | Skip | Coord | Gap   | Gap   |
| 70th %ile Green (s)     | 76.7  | 0.0  | 76.7  | 30.8  | 30.8  |
| 70th %ile Term Code     | Coord | Skip | Coord | Gap   | Gap   |
| 50th %ile Green (s)     | 80.3  | 0.0  | 80.3  | 27.2  | 27.2  |
| 50th %ile Term Code     | Coord | Skip | Coord | Gap   | Gap   |
| 30th %ile Green (s)     | 84.0  | 0.0  | 84.0  | 23.5  | 23.5  |
| 30th %ile Term Code     | Coord | Skip | Coord | Gap   | Gap   |
| 10th %ile Green (s)     | 89.2  | 0.0  | 89.2  | 18.3  | 18.3  |
| 10th %ile Term Code     | Coord | Skip | Coord | Gap   | Gap   |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 111 (93%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

93: Hammond M.S./Encore Apts & Seminary Rd

2035 Market with Traffic Mitigation

AM PEAK

|                     | ↖     | →    | ↗    | ↖    | ←     | ↗    | ↖    | ↖     | ↖     | ↖     | ↖    | ↖    | ↖     |
|---------------------|-------|------|------|------|-------|------|------|-------|-------|-------|------|------|-------|
| Lane Group          | EBL   | EBT  | EBR  | WBL  | WBT   | WBR  | NBL  | NBT   | NBR   | SBL   | SBT  | SBR  |       |
| Lane Configurations | ↖     | ↖↖↖  |      |      | ↖↖    |      |      | ↖     | ↖     | ↖     |      | ↖    | ↖     |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900  | 1900  | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12   | 12   | 12   | 12    | 12   | 12   | 12    | 12    | 12    | 12   | 12   | 12    |
| Grade (%)           |       | 0%   |      |      | 0%    |      |      | 0%    |       |       | 0%   |      |       |
| Storage Length (ft) | 100   |      | 0    | 0    |       | 0    | 0    |       | 0     | 0     |      | 0    | 0     |
| Storage Lanes       | 1     |      | 0    | 0    |       | 0    | 0    |       | 1     | 1     |      | 1    | 1     |
| Taper Length (ft)   | 50    |      |      | 50   |       |      |      |       | 50    | 50    |      |      |       |
| Lane Util. Factor   | 1.00  | 0.91 | 1.00 | 1.00 | 0.95  | 0.95 | 1.00 | 1.00  | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  |
| Ped Bike Factor     |       |      |      |      |       |      |      |       |       |       |      |      |       |
| Frt                 |       |      |      |      | 0.999 |      |      |       | 0.850 |       |      |      | 0.850 |
| Flt Protected       | 0.950 |      |      |      |       |      |      | 0.950 |       | 0.950 |      |      |       |
| Satd. Flow (prot)   | 1770  | 5085 | 0    | 0    | 3536  | 0    | 0    | 1770  | 1583  | 1770  | 0    | 1583 |       |
| Flt Permitted       | 0.262 |      |      |      |       |      |      | 0.950 |       | 0.740 |      |      |       |
| Satd. Flow (perm)   | 488   | 5085 | 0    | 0    | 3536  | 0    | 0    | 1770  | 1583  | 1378  | 0    | 1583 |       |
| Right Turn on Red   |       |      | Yes  |      |       | Yes  |      |       | Yes   |       |      |      | Yes   |
| Satd. Flow (RTOR)   |       |      |      |      | 1     |      |      |       | 5     |       |      |      | 43    |
| Link Speed (mph)    |       | 35   |      |      | 35    |      |      | 25    |       | 25    |      |      | 25    |
| Link Distance (ft)  |       | 464  |      |      | 317   |      |      | 257   |       | 372   |      |      | 372   |
| Travel Time (s)     |       | 9.0  |      |      | 6.2   |      |      | 7.0   |       | 10.1  |      |      | 10.1  |

Intersection Summary

Area Type: Other

Timings

2035 Market with Traffic Mitigation  
AM PEAK

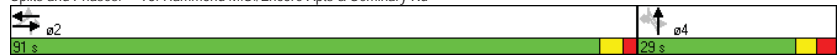
93: Hammond M.S./Encore Apts & Seminary Rd

| Lane Group           | EBL   | EBT   | WBT   | NBT   | NBR    | SBL   | SBR    |
|----------------------|-------|-------|-------|-------|--------|-------|--------|
| Lane Configurations  | ↔     | ↔↔↔   | ↔↔    | ↔     | ↔      | ↔     | ↔      |
| Volume (vph)         | 10    | 930   | 985   | 0     | 5      | 25    | 40     |
| Turn Type            | Perm  | NA    | NA    | NA    | custom | D.Pm  | custom |
| Protected Phases     |       | 2     | 2     | 4     |        | 2     | 4      |
| Permitted Phases     | 2     |       |       |       | 2      | 4     | 4      |
| Detector Phase       | 2     | 2     | 2     | 4     | 2      | 4     | 4      |
| Switch Phase         |       |       |       |       |        |       |        |
| Minimum Initial (s)  | 10.0  | 10.0  | 10.0  | 6.0   | 10.0   | 6.0   | 6.0    |
| Minimum Split (s)    | 21.5  | 21.5  | 21.5  | 29.0  | 21.5   | 29.0  | 29.0   |
| Total Split (s)      | 91.0  | 91.0  | 91.0  | 29.0  | 91.0   | 29.0  | 29.0   |
| Total Split (%)      | 75.8% | 75.8% | 75.8% | 24.2% | 75.8%  | 24.2% | 24.2%  |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.0   | 3.5    | 3.0   | 3.0    |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 3.0   | 2.0    | 3.0   | 3.0    |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0    | 0.0   | 0.0    |
| Total Lost Time (s)  | 5.5   | 5.5   | 5.5   | 6.0   | 5.5    | 6.0   | 6.0    |
| Lead/Lag             |       |       |       |       |        |       |        |
| Lead-Lag Optimize?   |       |       |       |       |        |       |        |
| Recall Mode          | C-Max | C-Max | C-Max | None  | C-Max  | None  | None   |
| Act Effct Green (s)  | 104.0 | 104.0 | 104.0 | 8.0   | 104.0  | 8.0   | 8.0    |
| Actuated g/C Ratio   | 0.87  | 0.87  | 0.87  | 0.07  | 0.87   | 0.07  | 0.07   |
| v/c Ratio            | 0.03  | 0.23  | 0.35  | 0.23  | 0.00   | 0.29  | 0.29   |
| Control Delay        | 2.1   | 2.0   | 0.4   | 56.8  | 1.2    | 60.6  | 20.4   |
| Queue Delay          | 0.0   | 0.0   | 0.3   | 0.0   | 0.0    | 0.0   | 0.0    |
| Total Delay          | 2.1   | 2.0   | 0.7   | 56.8  | 1.2    | 60.6  | 20.4   |
| LOS                  | A     | A     | A     | E     | A      | E     | C      |
| Approach Delay       |       | 2.0   | 0.7   | 48.1  |        |       |        |
| Approach LOS         |       | A     | A     | D     |        |       |        |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 14 (12%), Referenced to phase 2:WBEB, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.35  
 Intersection Signal Delay: 3.1  
 Intersection LOS: A  
 Intersection Capacity Utilization 52.0%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 93: Hammond M.S./Encore Apts & Seminary Rd



Phasings

2035 Market with Traffic Mitigation  
AM PEAK

93: Hammond M.S./Encore Apts & Seminary Rd

| Lane Group              | EBL   | EBT   | WBT   | NBT   | NBR   | SBL   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 2     | 2     | 4     |       |       |       |
| Permitted Phases        | 2     |       |       |       | 2     | 4     | 4     |
| Minimum Initial (s)     | 10.0  | 10.0  | 10.0  | 6.0   | 10.0  | 6.0   | 6.0   |
| Minimum Split (s)       | 21.5  | 21.5  | 21.5  | 29.0  | 21.5  | 29.0  | 29.0  |
| Total Split (s)         | 91.0  | 91.0  | 91.0  | 29.0  | 91.0  | 29.0  | 29.0  |
| Total Split (%)         | 75.8% | 75.8% | 75.8% | 24.2% | 75.8% | 24.2% | 24.2% |
| Maximum Green (s)       | 85.5  | 85.5  | 85.5  | 23.0  | 85.5  | 23.0  | 23.0  |
| Yellow Time (s)         | 3.5   | 3.5   | 3.5   | 3.0   | 3.5   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   |
| Lead/Lag                |       |       |       |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | C-Max | C-Max | C-Max | None  | C-Max | None  | None  |
| Walk Time (s)           |       |       |       | 7.0   |       | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |       |       | 16.0  |       | 16.0  | 16.0  |
| Pedestrian Calls (#/hr) |       |       |       | 0     |       | 0     | 0     |
| 90th %ile Green (s)     | 97.7  | 97.7  | 97.7  | 10.8  | 97.7  | 10.8  | 10.8  |
| 90th %ile Term Code     | Coord | Coord | Coord | Gap   | Coord | Gap   | Gap   |
| 70th %ile Green (s)     | 99.5  | 99.5  | 99.5  | 9.0   | 99.5  | 9.0   | 9.0   |
| 70th %ile Term Code     | Coord | Coord | Coord | Gap   | Coord | Gap   | Gap   |
| 50th %ile Green (s)     | 100.7 | 100.7 | 100.7 | 7.8   | 100.7 | 7.8   | 7.8   |
| 50th %ile Term Code     | Coord | Coord | Coord | Gap   | Coord | Gap   | Gap   |
| 30th %ile Green (s)     | 102.0 | 102.0 | 102.0 | 6.5   | 102.0 | 6.5   | 6.5   |
| 30th %ile Term Code     | Coord | Coord | Coord | Gap   | Coord | Gap   | Gap   |
| 10th %ile Green (s)     | 114.5 | 114.5 | 114.5 | 0.0   | 114.5 | 0.0   | 0.0   |
| 10th %ile Term Code     | Coord | Coord | Coord | Skip  | Coord | Skip  | Skip  |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 14 (12%), Referenced to phase 2:WBEB, Start of Yellow  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
 99: Beauregard St & New Southern Towers Street  
 2035 Market with Traffic Mitigation  
 AM PEAK

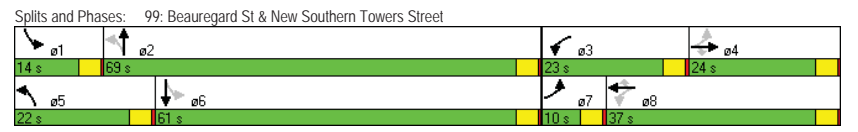
| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT  | WBR  | NBL   | NBT  | NBR  | SBL   | SBT  | SBR  |
|---------------------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|
| Lane Configurations | ↔     | ↗    | ↘    | ↔     | ↗    | ↘    | ↔     | ↗    | ↘    | ↔     | ↗    | ↘    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12   | 12   |
| Grade (%)           | 0%    |      |      | 0%    |      |      | -4%   |      |      | 2%    |      |      |
| Storage Length (ft) | 150   |      | 150  | 150   |      | 150  | 150   |      | 0    | 150   |      | 0    |
| Storage Lanes       | 1     |      | 1    | 1     |      | 1    | 1     |      | 0    | 1     |      | 0    |
| Taper Length (ft)   | 50    |      | 50   | 50    |      | 50   | 50    |      | 50   |       | 50   |      |
| 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     | 0.850 |      |      | 0.850 |      |      | 0.977 |      |      | 0.992 |      |      |
| Frt Protected       | 0.950 |      |      | 0.950 |      |      | 0.950 |      |      | 0.950 |      |      |
| Satd. Flow (prot)   | 1770  | 1863 | 1583 | 1770  | 1863 | 1583 | 1805  | 3527 | 0    | 1752  | 3476 | 0    |
| Frt Permitted       | 0.740 |      |      | 0.528 |      |      | 0.368 |      |      | 0.314 |      |      |
| Satd. Flow (perm)   | 1378  | 1863 | 1583 | 984   | 1863 | 1583 | 699   | 3527 | 0    | 579   | 3476 | 0    |
| Right Turn on Red   |       |      | Yes  |       |      | Yes  |       |      | Yes  |       |      | Yes  |
| Satd. Flow (RTOR)   |       |      | 81   |       |      | 226  |       |      | 23   |       |      | 6    |
| Link Speed (mph)    |       | 25   |      |       | 25   |      |       |      | 35   |       |      | 35   |
| Link Distance (ft)  |       | 338  |      |       | 704  |      |       |      | 568  |       |      | 809  |
| Travel Time (s)     |       | 9.2  |      |       | 19.2 |      |       |      | 11.1 |       |      | 15.8 |

Intersection Summary  
 Area Type: Other

Timings  
 99: Beauregard St & New Southern Towers Street  
 2035 Market with Traffic Mitigation  
 AM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↗     | ↘     | ↔     | ↗     | ↘     | ↔     | ↗     | ↘     | ↔     |
| Volume (vph)         | 10    | 25    | 75    | 155   | 25    | 210   | 50    | 715   | 55    | 435   |
| Turn Type            | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 4     | 8     |       | 8     | 2     |       | 6     |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 8.0   | 20.0  | 20.0  | 8.0   | 20.0  | 20.0  | 20.0  | 20.0  | 8.0   | 20.0  |
| Total Split (s)      | 10.0  | 24.0  | 24.0  | 23.0  | 37.0  | 37.0  | 22.0  | 69.0  | 14.0  | 61.0  |
| Total Split (%)      | 7.7%  | 18.5% | 18.5% | 17.7% | 28.5% | 28.5% | 16.9% | 53.1% | 10.8% | 46.9% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   |
| 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   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None  | Max   | C-Max | None  | C-Max |
| Act Effct Green (s)  | 13.4  | 7.6   | 7.6   | 27.4  | 23.4  | 23.4  | 94.6  | 85.7  | 63.8  | 57.0  |
| Actuated g/C Ratio   | 0.10  | 0.06  | 0.06  | 0.21  | 0.18  | 0.18  | 0.73  | 0.66  | 0.49  | 0.44  |
| v/c Ratio            | 0.07  | 0.25  | 0.48  | 0.55  | 0.08  | 0.48  | 0.07  | 0.39  | 0.17  | 0.32  |
| Control Delay        | 39.7  | 63.1  | 21.6  | 50.9  | 45.0  | 9.4   | 6.1   | 11.6  | 8.9   | 14.0  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.4   | 0.0   | 0.0   |
| Total Delay          | 39.7  | 63.1  | 21.6  | 50.9  | 45.0  | 9.4   | 6.1   | 12.0  | 8.9   | 14.0  |
| LOS                  | D     | E     | C     | D     | D     | A     | A     | B     | A     | B     |
| Approach Delay       |       | 32.7  |       |       | 28.2  |       |       | 11.6  |       | 13.4  |
| Approach LOS         |       | C     |       |       | C     |       |       | B     |       | B     |

Intersection Summary  
 Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 41 (32%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.55  
 Intersection Signal Delay: 16.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 52.5%  
 ICU Level of Service A  
 Analysis Period (min) 15



Phasings

99: Beauregard St & New Southern Towers Street

2035 Market with Traffic Mitigation

AM PEAK

| Lane Group              | EBL  | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 7    | 4     |       | 3     | 8     |       | 5     | 2     | 1     | 6     |
| Permitted Phases        | 4    |       | 4     | 8     |       | 8     |       |       | 6     |       |
| Minimum Initial (s)     | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 8.0  | 20.0  | 20.0  | 8.0   | 20.0  | 20.0  | 20.0  | 20.0  | 8.0   | 20.0  |
| Total Split (s)         | 10.0 | 24.0  | 24.0  | 23.0  | 37.0  | 37.0  | 22.0  | 69.0  | 14.0  | 61.0  |
| Total Split (%)         | 7.7% | 18.5% | 18.5% | 17.7% | 28.5% | 28.5% | 16.9% | 53.1% | 10.8% | 46.9% |
| Maximum Green (s)       | 6.0  | 20.0  | 20.0  | 19.0  | 33.0  | 33.0  | 18.0  | 65.0  | 10.0  | 57.0  |
| Yellow Time (s)         | 3.5  | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)        | 0.5  | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   |
| Lead/Lag                | Lead | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |      |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | None  | None  | None  | None  | None  | Max   | C-Max | None  | C-Max |
| Walk Time (s)           |      | 5.0   | 5.0   |       | 5.0   | 5.0   | 5.0   | 5.0   |       | 5.0   |
| Flash Dont Walk (s)     |      | 11.0  | 11.0  |       | 11.0  | 11.0  | 11.0  | 11.0  |       | 11.0  |
| Pedestrian Calls (#/hr) |      | 0     | 0     |       | 0     | 0     | 0     | 0     |       | 0     |
| 90th %ile Green (s)     | 6.0  | 10.6  | 10.6  | 19.0  | 23.6  | 23.6  | 27.4  | 76.1  | 8.3   | 57.0  |
| 90th %ile Term Code     | Max  | Gap   | Gap   | Max   | Hold  | Hold  | MaxR  | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 6.0  | 8.3   | 8.3   | 18.6  | 20.9  | 20.9  | 30.1  | 79.8  | 7.3   | 57.0  |
| 70th %ile Term Code     | Max  | Gap   | Gap   | Gap   | Hold  | Hold  | MaxR  | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 0.0  | 7.3   | 7.3   | 16.3  | 27.6  | 27.6  | 33.4  | 83.7  | 6.7   | 57.0  |
| 50th %ile Term Code     | Skip | Gap   | Gap   | Gap   | Hold  | Hold  | MaxR  | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 0.0  | 6.3   | 6.3   | 14.0  | 24.3  | 24.3  | 36.7  | 87.5  | 6.2   | 57.0  |
| 30th %ile Term Code     | Skip | Gap   | Gap   | Gap   | Hold  | Hold  | MaxR  | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 0.0  | 5.5   | 5.5   | 11.1  | 20.6  | 20.6  | 40.4  | 101.4 | 0.0   | 57.0  |
| 10th %ile Term Code     | Skip | Gap   | Gap   | Gap   | Hold  | Hold  | MaxR  | Coord | Skip  | Coord |

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 41 (32%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

100: Mark Center Dr & New Southern Towers Street

2035 Market with Traffic Mitigation

AM PEAK

| Lane Group          | EBL  | EBT   | EBR  | WBL  | WBT   | WBR  | NBL  | NBT   | NBR  | SBL  | SBT   | SBR  |
|---------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Lane Configurations |      | ↕     |      |      | ↕     |      |      | ↕     |      |      | ↕     |      |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12   |
| Grade (%)           |      | 0%    |      |      | 0%    |      |      | 0%    |      |      | 0%    |      |
| Storage Length (ft) | 0    |       | 0    | 0    |       | 0    | 0    |       | 0    | 0    |       | 0    |
| Storage Lanes       | 0    |       | 0    | 0    |       | 0    | 0    |       | 0    | 0    |       | 0    |
| Taper Length (ft)   | 50   |       | 50   |      | 50    |      | 50   |       | 50   |      | 50    |      |
| Lane Util. Factor   | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 0.95 | 0.95  | 0.95 | 0.95 | 0.95  | 0.95 |
| Ped Bike Factor     |      |       |      |      |       |      |      |       |      |      |       |      |
| Frt                 |      | 0.971 |      |      | 0.992 |      |      | 0.947 |      |      | 0.913 |      |
| Flt Protected       |      | 0.986 |      |      | 0.965 |      |      | 0.984 |      |      | 0.998 |      |
| Satd. Flow (prot)   | 0    | 1783  | 0    | 0    | 1783  | 0    | 0    | 3298  | 0    | 0    | 3225  | 0    |
| Flt Permitted       |      | 0.986 |      |      | 0.965 |      |      | 0.984 |      |      | 0.998 |      |
| Satd. Flow (perm)   | 0    | 1783  | 0    | 0    | 1783  | 0    | 0    | 3298  | 0    | 0    | 3225  | 0    |
| Link Speed (mph)    |      | 25    |      |      | 25    |      |      | 25    |      |      | 25    |      |
| Link Distance (ft)  |      | 704   |      |      | 420   |      |      | 642   |      |      | 447   |      |
| Travel Time (s)     |      | 19.2  |      |      | 11.5  |      |      | 17.5  |      |      | 12.2  |      |

Intersection Summary

Area Type: Other

Lanes and Geometrics  
102: Beaugard St & Roanoke Ave

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|------|------|-------|-------|------|-------|------|-------|-------|-------|------|
| Lane Configurations | ↔     | ↔    | ↔    | ↔     | ↔     | ↔    | ↔     | ↔    | ↔     | ↔     | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           | 0%    |      | 0%   |       | 0%    |      | 0%    |      | 0%    |       | 0%    |      |
| Storage Length (ft) | 200   |      | 0    | 150   |       | 250  | 150   |      | 0     | 150   |       | 0    |
| Storage Lanes       | 1     |      | 0    | 1     |       | 0    | 1     |      | 0     | 1     |       | 0    |
| Taper Length (ft)   | 50    |      |      | 50    |       |      | 50    |      |       | 50    |       |      |
| 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     |       |      |      |       |       |      |       |      |       |       |       |      |
| Frt                 | 0.957 |      |      |       | 0.873 |      |       |      | 0.998 |       | 0.997 |      |
| Flt Protected       | 0.950 |      |      | 0.950 |       |      | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (prot)   | 1770  | 1783 | 0    | 1770  | 1626  | 0    | 1770  | 3532 | 0     | 1770  | 3529  | 0    |
| Flt Permitted       | 0.664 |      |      | 0.465 |       |      | 0.548 |      |       | 0.239 |       |      |
| Satd. Flow (perm)   | 1237  | 1783 | 0    | 866   | 1626  | 0    | 1021  | 3532 | 0     | 445   | 3529  | 0    |
| Right Turn on Red   |       |      | Yes  |       |       | Yes  |       |      | Yes   |       |       | Yes  |
| Satd. Flow (RTOR)   | 14    |      |      |       | 124   |      |       |      | 1     |       | 2     |      |
| Link Speed (mph)    | 25    |      |      |       | 25    |      |       |      | 35    |       | 35    |      |
| Link Distance (ft)  | 767   |      |      |       | 695   |      |       |      | 531   |       | 927   |      |
| Travel Time (s)     | 20.9  |      |      |       | 19.0  |      |       |      | 10.3  |       | 18.1  |      |

Intersection Summary

Area Type: Other

Timings  
102: Beaugard St & Roanoke Ave

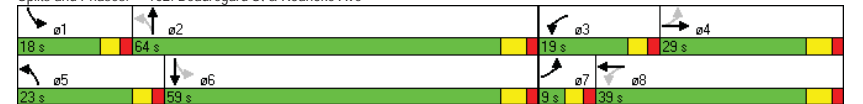
2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 20    | 50    | 155   | 20    | 240   | 920   | 110   | 260   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 9.0   | 27.0  | 9.0   | 27.0  | 9.0   | 27.0  | 9.0   | 27.0  |
| Total Split (s)      | 9.0   | 29.0  | 19.0  | 39.0  | 23.0  | 64.0  | 18.0  | 59.0  |
| Total Split (%)      | 6.9%  | 22.3% | 14.6% | 30.0% | 17.7% | 49.2% | 13.8% | 45.4% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.0   | 6.0   | 5.0   | 6.0   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  | 13.6  | 9.9   | 27.0  | 20.6  | 91.7  | 78.7  | 84.1  | 74.8  |
| Actuated g/C Ratio   | 0.10  | 0.08  | 0.21  | 0.16  | 0.71  | 0.61  | 0.65  | 0.58  |
| v/c Ratio            | 0.15  | 0.51  | 0.61  | 0.40  | 0.33  | 0.47  | 0.32  | 0.14  |
| Control Delay        | 40.6  | 57.9  | 52.9  | 14.8  | 7.8   | 15.0  | 11.7  | 13.0  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.3   | 0.0   | 0.0   |
| Total Delay          | 40.6  | 57.9  | 52.9  | 14.8  | 7.8   | 15.3  | 11.7  | 13.0  |
| LOS                  | D     | E     | D     | B     | A     | B     | B     | B     |
| Approach Delay       | 54.1  |       | 35.1  |       | 13.8  |       | 12.6  |       |
| Approach LOS         | D     |       | D     |       | B     |       | B     |       |

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 43 (33%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.61  
 Intersection Signal Delay: 18.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 62.6%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 102: Beaugard St & Roanoke Ave





Phasings

2035 Market with Traffic Mitigation

102: Beauregard St & Roanoke Ave

AM PEAK



| Lane Group              | EBL  | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 7    | 4     | 3     | 8     | 5     | 2     | 1     | 6     |
| Permitted Phases        | 4    |       | 8     |       | 2     |       | 6     |       |
| Minimum Initial (s)     | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 9.0  | 27.0  | 9.0   | 27.0  | 9.0   | 27.0  | 9.0   | 27.0  |
| Total Split (s)         | 9.0  | 29.0  | 19.0  | 39.0  | 23.0  | 64.0  | 18.0  | 59.0  |
| Total Split (%)         | 6.9% | 22.3% | 14.6% | 30.0% | 17.7% | 49.2% | 13.8% | 45.4% |
| Maximum Green (s)       | 4.0  | 23.0  | 14.0  | 33.0  | 18.0  | 58.0  | 13.0  | 53.0  |
| Yellow Time (s)         | 3.0  | 4.0   | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 2.0  | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |      |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | None  | None  | None  | C-Max | None  | C-Max |       |
| Walk Time (s)           |      | 7.0   |       | 7.0   |       | 7.0   |       | 7.0   |
| Flash Dont Walk (s)     |      | 14.0  |       | 14.0  |       | 14.0  |       | 14.0  |
| Pedestrian Calls (#/hr) |      | 0     |       | 0     |       | 0     |       | 0     |
| 90th %ile Green (s)     | 4.0  | 14.2  | 14.0  | 24.2  | 17.0  | 69.0  | 10.8  | 62.8  |
| 90th %ile Term Code     | Max  | Gap   | Max   | Hold  | Gap   | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 4.0  | 11.7  | 14.0  | 21.7  | 14.0  | 73.0  | 9.3   | 68.3  |
| 70th %ile Term Code     | Max  | Gap   | Max   | Hold  | Gap   | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 4.0  | 9.9   | 14.0  | 19.9  | 12.3  | 75.8  | 8.3   | 71.8  |
| 50th %ile Term Code     | Max  | Gap   | Max   | Hold  | Gap   | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 0.0  | 8.2   | 13.7  | 26.9  | 10.7  | 78.7  | 7.4   | 75.4  |
| 30th %ile Term Code     | Skip | Gap   | Gap   | Hold  | Gap   | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 0.0  | 0.0   | 11.1  | 10.1  | 7.4   | 96.9  | 6.0   | 95.5  |
| 10th %ile Term Code     | Skip | Skip  | Gap   | Hold  | Gap   | Coord | Gap   | Coord |

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 43 (33%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

2035 Market with Traffic Mitigation

105: Bradford Ct/Sheffield Ct & New Sanger Ave/Sanger Ave

AM PEAK



| Lane Group          | EBL   | EBT   | EBR  | WBL  | WBT  | WBR   | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|---------------------|-------|-------|------|------|------|-------|-------|-------|------|-------|-------|------|
| Lane Configurations |       |       |      |      |      |       |       |       |      |       |       |      |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900 | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12   | 12   | 12    | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           |       | 0%    |      |      | 0%   |       |       | 0%    |      |       | 0%    |      |
| Storage Length (ft) | 100   |       | 0    | 100  |      | 0     | 100   |       | 0    | 200   |       | 0    |
| Storage Lanes       | 1     |       | 0    | 0    |      | 1     | 1     |       | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50    |       |      | 50   |      |       | 50    |       |      | 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     |       |       |      |      |      |       |       |       |      |       |       |      |
| Frt                 |       | 0.991 |      |      |      | 0.850 |       | 0.855 |      |       | 0.925 |      |
| Flt Protected       | 0.950 |       |      |      |      |       | 0.950 |       |      | 0.950 |       |      |
| Satd. Flow (prot)   | 1770  | 1846  | 0    | 0    | 1863 | 1583  | 1770  | 1593  | 0    | 1770  | 1723  | 0    |
| Flt Permitted       | 0.515 |       |      |      |      |       | 0.751 |       |      | 0.355 |       |      |
| Satd. Flow (perm)   | 959   | 1846  | 0    | 0    | 1863 | 1583  | 1399  | 1593  | 0    | 661   | 1723  | 0    |
| Right Turn on Red   |       |       | Yes  |      |      | Yes   |       |       | Yes  |       |       | Yes  |
| Satd. Flow (RTOR)   |       | 5     |      |      |      | 376   |       | 296   |      | 5     |       |      |
| Link Speed (mph)    |       | 25    |      |      | 25   |       |       | 25    |      | 30    |       |      |
| Link Distance (ft)  |       | 940   |      |      | 417  |       |       | 667   |      | 748   |       |      |
| Travel Time (s)     |       | 25.6  |      |      | 11.4 |       |       | 18.2  |      | 17.0  |       |      |

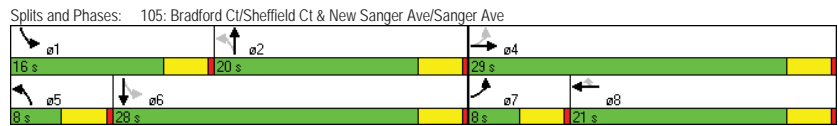
Intersection Summary

Area Type: Other

**Timings** 2035 Market with Traffic Mitigation  
 105: Bradford Ct/Sheffield Ct & New Sanger Ave/Sanger Ave AM PEAK

| Lane Group           | EBL   | EBT   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 5     | 75    | 145   | 350   | 10    | 10    | 290   | 5     |
| Turn Type            | pm+pt | NA    | NA    | Perm  | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 7     | 4     | 8     |       | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       |       | 8     | 2     |       | 6     |       |
| Detector Phase       | 7     | 4     | 8     | 8     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 8.0   | 20.0  | 20.0  | 20.0  | 8.0   | 20.0  | 8.0   | 20.0  |
| Total Split (s)      | 8.0   | 29.0  | 21.0  | 21.0  | 8.0   | 20.0  | 16.0  | 28.0  |
| Total Split (%)      | 12.3% | 44.6% | 32.3% | 32.3% | 12.3% | 30.8% | 24.6% | 43.1% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  |       | Lag   | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Max | C-Max | C-Max | None  | Max   | None  | Max   |
| Act Effct Green (s)  | 25.0  | 25.0  | 23.4  | 23.4  | 21.0  | 17.0  | 32.0  | 30.4  |
| Actuated g/C Ratio   | 0.38  | 0.38  | 0.36  | 0.36  | 0.32  | 0.26  | 0.49  | 0.47  |
| v/c Ratio            | 0.01  | 0.12  | 0.23  | 0.46  | 0.02  | 0.48  | 0.61  | 0.01  |
| Control Delay        | 17.2  | 16.8  | 16.8  | 4.5   | 8.1   | 4.6   | 16.2  | 7.8   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 17.2  | 16.8  | 16.8  | 4.5   | 8.1   | 4.6   | 16.2  | 7.8   |
| LOS                  | B     | B     | B     | A     | A     | A     | B     | A     |
| Approach Delay       |       | 16.9  | 8.1   |       |       | 4.7   |       | 16.0  |
| Approach LOS         |       | B     | A     |       |       | A     |       | B     |

**Intersection Summary**  
 Cycle Length: 65  
 Actuated Cycle Length: 65  
 Offset: 62 (95%), Referenced to phase 4:EBTL and 8:WBT, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.61  
 Intersection Signal Delay: 9.9 Intersection LOS: A  
 Intersection Capacity Utilization 52.5% ICU Level of Service A  
 Analysis Period (min) 15



**Phasings** 2035 Market with Traffic Mitigation  
 105: Bradford Ct/Sheffield Ct & New Sanger Ave/Sanger Ave AM PEAK

| Lane Group              | EBL   | EBT   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 7     | 4     | 8     |       | 5     | 2     | 1     | 6     |
| Permitted Phases        | 4     |       |       | 8     | 2     |       | 6     |       |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 8.0   | 20.0  | 20.0  | 20.0  | 8.0   | 20.0  | 8.0   | 20.0  |
| Total Split (s)         | 8.0   | 29.0  | 21.0  | 21.0  | 8.0   | 20.0  | 16.0  | 28.0  |
| Total Split (%)         | 12.3% | 44.6% | 32.3% | 32.3% | 12.3% | 30.8% | 24.6% | 43.1% |
| Maximum Green (s)       | 4.0   | 25.0  | 17.0  | 17.0  | 4.0   | 16.0  | 12.0  | 24.0  |
| Yellow Time (s)         | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)        | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   |
| Lead/Lag                | Lead  |       | Lag   | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | C-Max | C-Max | C-Max | None  | Max   | None  | Max   |
| Walk Time (s)           |       | 5.0   | 5.0   | 5.0   |       | 5.0   |       | 5.0   |
| Flash Dont Walk (s)     |       | 11.0  | 11.0  | 11.0  |       | 11.0  |       | 11.0  |
| Pedestrian Calls (#/hr) |       | 0     | 0     | 0     |       | 0     |       | 0     |
| 90th %ile Green (s)     | 4.0   | 25.0  | 17.0  | 17.0  | 4.0   | 16.0  | 12.0  | 24.0  |
| 90th %ile Term Code     | Max   | Coord | Coord | Coord | Max   | MaxR  | Max   | MaxR  |
| 70th %ile Green (s)     | 0.0   | 25.0  | 25.0  | 25.0  | 0.0   | 16.0  | 12.0  | 32.0  |
| 70th %ile Term Code     | Skip  | Coord | Coord | Coord | Skip  | MaxR  | Max   | MaxR  |
| 50th %ile Green (s)     | 0.0   | 25.0  | 25.0  | 25.0  | 0.0   | 16.0  | 12.0  | 32.0  |
| 50th %ile Term Code     | Skip  | Coord | Coord | Coord | Skip  | MaxR  | Max   | MaxR  |
| 30th %ile Green (s)     | 0.0   | 25.0  | 25.0  | 25.0  | 0.0   | 17.3  | 10.7  | 32.0  |
| 30th %ile Term Code     | Skip  | Coord | Coord | Coord | Skip  | MaxR  | Gap   | MaxR  |
| 10th %ile Green (s)     | 0.0   | 25.0  | 25.0  | 25.0  | 0.0   | 19.6  | 8.4   | 32.0  |
| 10th %ile Term Code     | Skip  | Coord | Coord | Coord | Skip  | MaxR  | Gap   | MaxR  |

**Intersection Summary**  
 Cycle Length: 65  
 Actuated Cycle Length: 65  
 Offset: 62 (95%), Referenced to phase 4:EBTL and 8:WBT, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
107: New JBG Street & Sanger Ave

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL  | EBT   | EBR  | WBL  | WBT   | WBR  | NBL   | NBT   | NBR   | SBL  | SBT   | SBR  |
|---------------------|------|-------|------|------|-------|------|-------|-------|-------|------|-------|------|
| Lane Configurations |      | ↔     |      |      | ↔     |      | ↔     | ↔     |       | ↔    | ↔     |      |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12   | 12   | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12   |
| Grade (%)           |      | 0%    |      |      | 0%    |      |       | 0%    |       |      | 0%    |      |
| Storage Length (ft) | 100  |       | 0    | 100  |       | 0    | 100   |       | 0     | 100  |       | 0    |
| Storage Lanes       | 0    |       | 0    | 0    |       | 0    | 1     |       | 0     | 1    |       | 0    |
| Taper Length (ft)   | 50   |       |      | 50   |       |      | 50    |       |       | 50   |       |      |
| Lane Util. Factor   | 0.95 | 0.95  | 0.95 | 0.95 | 0.95  | 0.95 | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 |
| Ped Bike Factor     |      |       |      |      |       |      |       |       |       |      |       |      |
| Frt                 |      | 0.995 |      |      | 0.988 |      |       | 0.850 |       |      | 0.850 |      |
| Flt Protected       |      | 0.998 |      |      | 0.996 |      | 0.950 |       | 0.950 |      | 0.950 |      |
| Satd. Flow (prot)   | 0    | 3514  | 0    | 0    | 3483  | 0    | 1770  | 1583  | 0     | 1770 | 1583  | 0    |
| Flt Permitted       |      | 0.998 |      |      | 0.996 |      | 0.950 |       | 0.950 |      | 0.950 |      |
| Satd. Flow (perm)   | 0    | 3514  | 0    | 0    | 3483  | 0    | 1770  | 1583  | 0     | 1770 | 1583  | 0    |
| Link Speed (mph)    |      | 25    |      |      | 25    |      | 25    |       | 25    |      | 25    |      |
| Link Distance (ft)  |      | 417   |      |      | 517   |      | 716   |       | 782   |      | 782   |      |
| Travel Time (s)     |      | 11.4  |      |      | 14.1  |      | 19.5  |       | 21.3  |      | 21.3  |      |

Intersection Summary

Area Type: Other

Lanes and Geometrics  
111: Van Dorn St & Library Ln Ext

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | WBL   | WBR   | NBT  | NBR   | SBL  | SBT  |
|---------------------|-------|-------|------|-------|------|------|
| Lane Configurations | ↔     | ↔     | ↑    | ↔     | ↔    | ↑    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12   | 12   |
| Grade (%)           | 0%    |       | 0%   |       |      | 0%   |
| Storage Length (ft) | 100   | 0     |      | 250   | 100  |      |
| Storage Lanes       | 1     | 1     |      | 1     | 1    |      |
| Taper Length (ft)   | 50    |       |      | 50    |      |      |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95 | 1.00  | 1.00 | 0.95 |
| Ped Bike Factor     |       |       |      |       |      |      |
| Frt                 |       | 0.850 |      | 0.850 |      |      |
| Flt Protected       | 0.950 |       |      | 0.950 |      |      |
| Satd. Flow (prot)   | 1770  | 1583  | 3539 | 1583  | 1770 | 3539 |
| Flt Permitted       | 0.950 |       |      | 0.037 |      |      |
| Satd. Flow (perm)   | 1770  | 1583  | 3539 | 1583  | 69   | 3539 |
| Right Turn on Red   |       | Yes   |      | Yes   |      |      |
| Satd. Flow (RTOR)   |       | 59    |      | 627   |      |      |
| Link Speed (mph)    | 35    |       | 35   |       | 35   |      |
| Link Distance (ft)  | 665   |       | 1898 |       | 652  |      |
| Travel Time (s)     | 13.0  |       | 37.0 |       | 12.7 |      |

Intersection Summary

Area Type: Other

**Timings**  
**111: Van Dorn St & Library Ln Ext**

2035 Market with Traffic Mitigation  
 AM PEAK

| Lane Group           | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↑↑    | ↔     | ↔     | ↑↑    |
| Volume (vph)         | 5     | 55    | 2180  | 690   | 50    | 570   |
| Turn Type            | NA    | Perm  | NA    | Perm  | pm+pt | NA    |
| Protected Phases     | 8     |       | 2     |       | 1     | 6     |
| Permitted Phases     |       | 8     |       | 2     | 6     |       |
| Detector Phase       | 8     | 8     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 21.0  | 21.0  | 22.0  | 22.0  | 9.0   | 22.0  |
| Total Split (s)      | 21.0  | 21.0  | 108.0 | 108.0 | 11.0  | 119.0 |
| Total Split (%)      | 15.0% | 15.0% | 77.1% | 77.1% | 7.9%  | 85.0% |
| Yellow Time (s)      | 3.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.0   | 5.0   | 6.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       | Lag   | Lag   | Lead  |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |
| Recall Mode          | None  | None  | C-Max | C-Max | None  | C-Max |
| Act Effct Green (s)  | 6.8   | 6.8   | 116.0 | 116.0 | 125.3 | 125.5 |
| Actuated g/C Ratio   | 0.05  | 0.05  | 0.83  | 0.83  | 0.90  | 0.90  |
| v/c Ratio            | 0.06  | 0.44  | 0.80  | 0.52  | 0.38  | 0.19  |
| Control Delay        | 63.4  | 25.2  | 2.4   | 0.1   | 29.0  | 0.6   |
| Queue Delay          | 0.0   | 0.0   | 0.3   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 63.4  | 25.2  | 2.7   | 0.1   | 29.0  | 0.6   |
| LOS                  | E     | C     | A     | A     | C     | A     |
| Approach Delay       | 28.2  |       | 2.1   |       |       | 2.9   |
| Approach LOS         | C     |       | A     |       |       | A     |

**Intersection Summary**  
 Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 139 (99%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.80  
 Intersection Signal Delay: 2.7  
 Intersection LOS: A  
 Intersection Capacity Utilization 72.8%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 111: Van Dorn St & Library Ln Ext



**Phasings**  
**111: Van Dorn St & Library Ln Ext**

2035 Market with Traffic Mitigation  
 AM PEAK

| Lane Group              | WBL   | WBR   | NBT   | NBR   | SBL  | SBT   |
|-------------------------|-------|-------|-------|-------|------|-------|
| Protected Phases        | 8     |       | 2     |       | 1    | 6     |
| Permitted Phases        |       | 8     |       | 2     | 6    |       |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0  | 4.0   |
| Minimum Split (s)       | 21.0  | 21.0  | 22.0  | 22.0  | 9.0  | 22.0  |
| Total Split (s)         | 21.0  | 21.0  | 108.0 | 108.0 | 11.0 | 119.0 |
| Total Split (%)         | 15.0% | 15.0% | 77.1% | 77.1% | 7.9% | 85.0% |
| Maximum Green (s)       | 16.0  | 16.0  | 102.0 | 102.0 | 6.0  | 113.0 |
| Yellow Time (s)         | 3.0   | 3.0   | 4.0   | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.0  | 2.0   |
| Lead/Lag                |       |       | Lag   | Lag   | Lead |       |
| Lead-Lag Optimize?      |       |       |       |       |      |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None  | None  | C-Max | C-Max | None | C-Max |
| Walk Time (s)           | 5.0   | 5.0   | 5.0   | 5.0   | 5.0  | 5.0   |
| Flash Dont Walk (s)     | 11.0  | 11.0  | 11.0  | 11.0  |      | 11.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0    | 0     |
| 90th %ile Green (s)     | 10.0  | 10.0  | 105.1 | 105.1 | 8.9  | 119.0 |
| 90th %ile Term Code     | Gap   | Gap   | Coord | Coord | Gap  | Coord |
| 70th %ile Green (s)     | 7.3   | 7.3   | 110.0 | 110.0 | 6.7  | 121.7 |
| 70th %ile Term Code     | Gap   | Gap   | Coord | Coord | Gap  | Coord |
| 50th %ile Green (s)     | 5.8   | 5.8   | 112.3 | 112.3 | 5.9  | 123.2 |
| 50th %ile Term Code     | Gap   | Gap   | Coord | Coord | Gap  | Coord |
| 30th %ile Green (s)     | 5.5   | 5.5   | 112.7 | 112.7 | 5.8  | 123.5 |
| 30th %ile Term Code     | Gap   | Gap   | Coord | Coord | Gap  | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   | 134.0 | 134.0 | 0.0  | 134.0 |
| 10th %ile Term Code     | Skip  | Skip  | Coord | Coord | Skip | Coord |

**Intersection Summary**  
 Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 139 (99%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
114: Kenmore Ave & Seminary Rd

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL  | EBT   | EBR  | WBL  | WBT   | WBR  | NBL  | NBT  | NBR   | SBL  | SBT  | SBR   |
|---------------------|------|-------|------|------|-------|------|------|------|-------|------|------|-------|
| Lane Configurations |      | ↑↑↑   |      |      | ↑↑↑   |      |      |      | ↑     |      |      | ↑     |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12   | 12    | 12   | 12   | 12    |
| Grade (%)           |      | 0%    |      |      | 0%    |      |      | 0%   |       |      | 0%   |       |
| Storage Length (ft) | 0    |       | 0    | 0    |       | 0    | 0    |      | 0     | 0    |      | 0     |
| Storage Lanes       | 0    |       | 0    | 0    |       | 0    | 0    |      | 1     | 0    |      | 1     |
| Taper Length (ft)   | 50   |       |      | 50   |       |      | 50   |      |       | 50   |      |       |
| Lane Util. Factor   | 1.00 | 0.91  | 0.91 | 1.00 | 0.91  | 0.91 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  |
| Ped Bike Factor     |      | 0.991 |      |      | 0.994 |      |      |      | 0.865 |      |      | 0.865 |
| Flt Protected       |      |       |      |      |       |      |      |      |       |      |      |       |
| Satd. Flow (prot)   | 0    | 5040  | 0    | 0    | 5055  | 0    | 0    | 0    | 1611  | 0    | 0    | 1611  |
| Flt Permitted       |      |       |      |      |       |      |      |      |       |      |      |       |
| Satd. Flow (perm)   | 0    | 5040  | 0    | 0    | 5055  | 0    | 0    | 0    | 1611  | 0    | 0    | 1611  |
| Link Speed (mph)    |      | 35    |      |      | 35    |      |      | 25   |       |      | 25   |       |
| Link Distance (ft)  |      | 195   |      |      | 277   |      |      | 600  |       |      | 463  |       |
| Travel Time (s)     |      | 3.8   |      |      | 5.4   |      |      | 16.4 |       |      | 12.6 |       |

**Intersection Summary**  
Area Type: Other

Lanes and Geometrics  
119: South HOV Ramp & Seminary Rd

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBT  | EBR  | WBL  | WBT  | NBL   | NBR  |
|---------------------|------|------|------|------|-------|------|
| Lane Configurations | ↑↑   |      |      | ↑↑   | ↑↑    | ↑    |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12   | 12   | 12   | 12    | 12   |
| Grade (%)           | 0%   |      |      | 0%   | 0%    |      |
| Storage Length (ft) |      | 0    | 0    |      | 0     | 0    |
| Storage Lanes       |      | 0    | 0    |      | 1     | 0    |
| Taper Length (ft)   |      |      | 50   |      | 50    |      |
| Lane Util. Factor   | 0.95 | 0.95 | 0.95 | 0.95 | 1.00  | 1.00 |
| Ped Bike Factor     |      |      |      |      |       |      |
| Flt Protected       |      |      |      |      | 0.976 |      |
| Satd. Flow (prot)   | 3539 | 0    | 0    | 3539 | 1747  | 0    |
| Flt Permitted       |      |      |      |      | 0.961 |      |
| Satd. Flow (perm)   | 3539 | 0    | 0    | 3539 | 1747  | 0    |
| Right Turn on Red   |      | Yes  |      |      |       | Yes  |
| Satd. Flow (RTOR)   |      |      |      |      | 31    |      |
| Link Speed (mph)    | 35   |      |      | 35   | 30    |      |
| Link Distance (ft)  | 818  |      |      | 409  | 640   |      |
| Travel Time (s)     | 15.9 |      |      | 8.0  | 14.5  |      |

**Intersection Summary**  
Area Type: Other

Timings  
119: South HOV Ramp & Seminary Rd

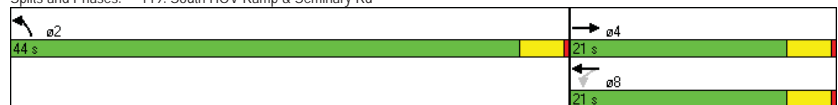
2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBT   | WBT   | NBL   |
|----------------------|-------|-------|-------|
| Lane Configurations  | ↔↔    | ↔↔    | ↔     |
| Volume (vph)         | 620   | 700   | 785   |
| Turn Type            | NA    | NA    | NA    |
| Protected Phases     | 4     | 8     | 2     |
| Permitted Phases     |       |       |       |
| Detector Phase       | 4     | 8     | 2     |
| Switch Phase         |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 20.0  | 20.0  | 20.0  |
| Total Split (s)      | 21.0  | 21.0  | 44.0  |
| Total Split (%)      | 32.3% | 32.3% | 67.7% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 0.5   | 0.5   | 0.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   |
| Lead/Lag             |       |       |       |
| Lead-Lag Optimize?   |       |       |       |
| Recall Mode          | C-Max | C-Max | Max   |
| Act Effct Green (s)  | 17.0  | 17.0  | 40.0  |
| Actuated g/C Ratio   | 0.26  | 0.26  | 0.62  |
| v/c Ratio            | 0.72  | 0.81  | 0.94  |
| Control Delay        | 27.0  | 31.3  | 30.6  |
| Queue Delay          | 0.0   | 0.0   | 0.0   |
| Total Delay          | 27.0  | 31.3  | 30.6  |
| LOS                  | C     | C     | C     |
| Approach Delay       | 27.0  | 31.3  | 30.6  |
| Approach LOS         | C     | C     | C     |

Intersection Summary

Cycle Length: 65  
 Actuated Cycle Length: 65  
 Offset: 1 (2%), Referenced to phase 4:EBT and 8:WBTL, Start of Green  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.94  
 Intersection Signal Delay: 29.9  
 Intersection LOS: C  
 Intersection Capacity Utilization 83.4%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 119: South HOV Ramp & Seminary Rd



Phasings  
119: South HOV Ramp & Seminary Rd

2035 Market with Traffic Mitigation  
AM PEAK


| Lane Group              | EBT   | WBT   | NBL   |
|-------------------------|-------|-------|-------|
| Protected Phases        | 4     | 8     | 2     |
| Permitted Phases        |       |       |       |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 20.0  | 20.0  | 20.0  |
| Total Split (s)         | 21.0  | 21.0  | 44.0  |
| Total Split (%)         | 32.3% | 32.3% | 67.7% |
| Maximum Green (s)       | 17.0  | 17.0  | 40.0  |
| Yellow Time (s)         | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)        | 0.5   | 0.5   | 0.5   |
| Lead/Lag                |       |       |       |
| Lead-Lag Optimize?      |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   |
| Recall Mode             | C-Max | C-Max | Max   |
| Walk Time (s)           | 5.0   | 5.0   | 5.0   |
| Flash Dont Walk (s)     | 11.0  | 11.0  | 11.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     |
| 90th %ile Green (s)     | 17.0  | 17.0  | 40.0  |
| 90th %ile Term Code     | Coord | Coord | MaxR  |
| 70th %ile Green (s)     | 17.0  | 17.0  | 40.0  |
| 70th %ile Term Code     | Coord | Coord | MaxR  |
| 50th %ile Green (s)     | 17.0  | 17.0  | 40.0  |
| 50th %ile Term Code     | Coord | Coord | MaxR  |
| 30th %ile Green (s)     | 17.0  | 17.0  | 40.0  |
| 30th %ile Term Code     | Coord | Coord | MaxR  |
| 10th %ile Green (s)     | 17.0  | 17.0  | 40.0  |
| 10th %ile Term Code     | Coord | Coord | MaxR  |

Intersection Summary

Cycle Length: 65  
 Actuated Cycle Length: 65  
 Offset: 1 (2%), Referenced to phase 4:EBT and 8:WBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
122: Seminary Rd (N) & North HOV Ramp

2035 Market with Traffic Mitigation  
AM PEAK




| Lane Group          | EBL  | EBT  | WBT   | WBR  | SBL  | SBR  |
|---------------------|------|------|-------|------|------|------|
| Lane Configurations |      |      | ↑↑↑   |      |      | ↑    |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           |      | 0%   | 0%    |      | 0%   |      |
| Storage Length (ft) | 0    |      |       | 0    | 0    | 0    |
| Storage Lanes       | 0    |      |       | 0    | 0    | 1    |
| Taper Length (ft)   | 50   |      |       |      | 50   |      |
| Lane Util. Factor   | 1.00 | 1.00 | 0.91  | 0.91 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      | 0.983 |      |      |      |
| Frt                 |      |      |       |      |      |      |
| Flt Protected       |      |      |       |      |      |      |
| Satd. Flow (prot)   | 0    | 0    | 4999  | 0    | 0    | 1863 |
| Flt Permitted       |      |      |       |      |      |      |
| Satd. Flow (perm)   | 0    | 0    | 4999  | 0    | 0    | 1863 |
| Link Speed (mph)    |      | 35   | 35    |      | 30   |      |
| Link Distance (ft)  |      | 163  | 117   |      | 540  |      |
| Travel Time (s)     |      | 3.2  | 2.3   |      | 12.3 |      |

**Intersection Summary**  
Area Type: Other

Lanes and Geometrics  
191: I-395 SB On-Ramp & Seminary Rd (S)

2035 Market with Traffic Mitigation  
AM PEAK



| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL   | SBT   | SBR  |
|---------------------|------|-------|-------|------|------|------|------|------|------|-------|-------|------|
| Lane Configurations |      | ↑↑    | ↑     |      |      |      |      |      |      | ↑     | ↑     | ↑    |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12    | 12    | 12   |
| Grade (%)           |      | 0%    |       |      | 0%   |      |      | 0%   |      |       | 0%    |      |
| Storage Length (ft) | 0    |       | 0     | 0    |      | 0    | 0    |      | 0    | 0     |       | 0    |
| Storage Lanes       | 1    |       | 1     | 0    |      | 0    | 0    |      | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50   |       |       | 50   |      |      |      |      | 50   |       |       | 50   |
| Lane Util. Factor   | 1.00 | 0.91  | 0.91  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91  | 0.91  | 1.00 |
| Ped Bike Factor     |      |       |       |      |      |      |      |      |      |       |       |      |
| Frt                 |      | 0.978 | 0.850 |      |      |      |      |      |      |       |       |      |
| Flt Protected       |      |       |       |      |      |      |      |      |      | 0.950 | 0.998 |      |
| Satd. Flow (prot)   | 0    | 3316  | 1441  | 0    | 0    | 0    | 0    | 0    | 0    | 1610  | 3383  | 0    |
| Flt Permitted       |      |       |       |      |      |      |      |      |      | 0.950 | 0.998 |      |
| Satd. Flow (perm)   | 0    | 3316  | 1441  | 0    | 0    | 0    | 0    | 0    | 0    | 1610  | 3383  | 0    |
| Right Turn on Red   |      |       | Yes   |      |      | Yes  |      |      | Yes  | Yes   | Yes   | Yes  |
| Satd. Flow (RTOR)   |      | 10    | 235   |      |      |      |      |      |      | 17    | 5     |      |
| Link Speed (mph)    |      | 35    |       |      | 35   |      |      |      | 35   |       |       | 35   |
| Link Distance (ft)  |      | 371   |       |      | 307  |      |      |      | 340  |       |       | 280  |
| Travel Time (s)     |      | 7.2   |       |      | 6.0  |      |      |      | 6.6  |       |       | 5.5  |

**Intersection Summary**  
Area Type: Other

Timings  
191: I-395 SB On-Ramp & Seminary Rd (S)

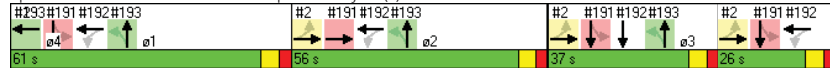
2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBT   | EBR   | SBL   | SBT   | ø1   | ø3   | ø4   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  | ↔↔    | ↗     | ↘     | ↕     |      |      |      |
| Volume (vph)         | 825   | 555   | 235   | 505   |      |      |      |
| Turn Type            | NA    | Free  | Perm  | NA    |      |      |      |
| Protected Phases     | 2     |       | 1 3 4 | 1 3 4 | 1    | 3    | 4    |
| Permitted Phases     |       | Free  | 1 3 4 |       |      |      |      |
| Detector Phase       | 2     |       | 1 3 4 | 1 3 4 |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  | 10.0  |       |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    | 22.5  |       |       |       | 22.5 | 22.5 | 23.0 |
| Total Split (s)      | 56.0  | 0.0   | 124.0 | 124.0 | 61.0 | 37.0 | 26.0 |
| Total Split (%)      | 31.1% | 0.0%  | 68.9% | 68.9% | 34%  | 21%  | 14%  |
| Yellow Time (s)      | 4.0   |       |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     | 2.5   |       |       |       | 2.5  | 2.5  | 3.0  |
| Lost Time Adjust (s) | -2.5  | 0.0   | -2.5  | -2.5  |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             | Lag   |       |       |       | Lead | Lead | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          | Min   |       |       |       | Min  | Min  | Min  |
| Act Effct Green (s)  | 52.0  | 180.0 | 120.0 | 120.0 |      |      |      |
| Actuated g/C Ratio   | 0.29  | 1.00  | 0.67  | 0.67  |      |      |      |
| v/c Ratio            | 1.07  | 0.31  | 0.21  | 0.25  |      |      |      |
| Control Delay        | 109.0 | 0.6   | 6.2   | 7.6   |      |      |      |
| Queue Delay          | 0.0   | 0.0   | 2.9   | 0.8   |      |      |      |
| Total Delay          | 109.0 | 0.6   | 9.1   | 8.4   |      |      |      |
| LOS                  | F     | A     | A     | A     |      |      |      |
| Approach Delay       | 76.3  |       |       | 8.6   |      |      |      |
| Approach LOS         | E     |       |       | A     |      |      |      |

Intersection Summary

|   |                        |
|---|------------------------|
| Cycle Length: 180                       |                        |
| Actuated Cycle Length: 180              |                        |
| Natural Cycle: 105                      |                        |
| Control Type: Actuated-Uncoordinated    |                        |
| Maximum v/c Ratio: 1.25                 |                        |
| Intersection Signal Delay: 52.7         | Intersection LOS: D    |
| Intersection Capacity Utilization 64.1% | ICU Level of Service C |
| Analysis Period (min) 15                |                        |

Splits and Phases: 191: I-395 SB On-Ramp & Seminary Rd (S)



Phasings  
191: I-395 SB On-Ramp & Seminary Rd (S)

2035 Market with Traffic Mitigation  
AM PEAK

| Lane Group              | EBT   | EBR  | SBL   | SBT   | ø1   | ø3   | ø4   |
|-------------------------|-------|------|-------|-------|------|------|------|
| Protected Phases        | 2     |      |       | 1 3 4 | 1    | 3    | 4    |
| Permitted Phases        |       | Free | 1 3 4 |       |      |      |      |
| Minimum Initial (s)     | 10.0  |      |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       | 22.5  |      |       |       | 22.5 | 22.5 | 23.0 |
| Total Split (s)         | 56.0  | 0.0  | 124.0 | 124.0 | 61.0 | 37.0 | 26.0 |
| Total Split (%)         | 31.1% | 0.0% | 68.9% | 68.9% | 34%  | 21%  | 14%  |
| Maximum Green (s)       | 49.5  |      |       |       | 54.5 | 30.5 | 19.0 |
| Yellow Time (s)         | 4.0   |      |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        | 2.5   |      |       |       | 2.5  | 2.5  | 3.0  |
| Lead/Lag                | Lag   |      |       |       | Lead | Lead | Lag  |
| Lead-Lag Optimize?      |       |      |       |       |      |      |      |
| Vehicle Extension (s)   | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Minimum Gap (s)         | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Recall Mode             | Min   |      |       |       | Min  | Min  | Min  |
| Walk Time (s)           |       |      |       |       |      |      |      |
| Flash Dont Walk (s)     |       |      |       |       |      |      |      |
| Pedestrian Calls (#/hr) |       |      |       |       |      |      |      |
| 90th %ile Green (s)     | 49.5  |      |       |       | 54.5 | 30.5 | 19.0 |
| 90th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 70th %ile Green (s)     | 49.5  |      |       |       | 54.5 | 30.5 | 19.0 |
| 70th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 50th %ile Green (s)     | 49.5  |      |       |       | 54.5 | 30.5 | 19.0 |
| 50th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 30th %ile Green (s)     | 49.5  |      |       |       | 54.5 | 30.5 | 19.0 |
| 30th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 10th %ile Green (s)     | 49.5  |      |       |       | 54.5 | 30.5 | 19.0 |
| 10th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |

Intersection Summary

|                                      |
|--------------------------------------|
| Cycle Length: 180                    |
| Actuated Cycle Length: 180           |
| Control Type: Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: 180        |
| 70th %ile Actuated Cycle: 180        |
| 50th %ile Actuated Cycle: 180        |
| 30th %ile Actuated Cycle: 180        |
| 10th %ile Actuated Cycle: 180        |



Lanes and Geometrics 2035 Market with Traffic Mitigation  
AM PEAK  
192: I-395 SB On-Ramp/I-395 SB Off-Ramp & Seminary Rd (N)

| Lane Group          | EBL  | EBT  | EBR  | WBL   | WBT   | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR   |  |
|---------------------|------|------|------|-------|-------|------|------|------|------|------|------|-------|--|
| Lane Configurations |      |      |      | ↔     | ↔     |      |      |      |      |      | ↔    | ↔     |  |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  |  |
| Lane Width (ft)     | 12   | 12   | 12   | 12    | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12    |  |
| Grade (%)           | 0%   |      |      | 0%    |       |      | 0%   |      |      | 0%   |      |       |  |
| Storage Length (ft) | 0    | 0    | 0    | 0     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 600   |  |
| Storage Lanes       | 0    | 0    | 0    | 1     | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 1     |  |
| Taper Length (ft)   | 50   | 50   | 50   | 50    | 50    | 50   | 50   | 50   | 50   | 50   | 50   | 50    |  |
| Lane Util. Factor   | 1.00 | 1.00 | 1.00 | 0.91  | 0.91  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00  |  |
| Ped Bike Factor     | Frt  |      |      |       |       |      |      |      |      |      |      |       |  |
|                     |      |      |      |       |       |      |      |      |      |      |      | 0.850 |  |
| Flt Protected       |      |      |      | 0.950 | 0.983 |      |      |      |      |      |      |       |  |
| Satd. Flow (prot)   | 0    | 0    | 0    | 1610  | 3333  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583  |  |
| Flt Permitted       |      |      |      | 0.950 | 0.983 |      |      |      |      |      |      |       |  |
| Satd. Flow (perm)   | 0    | 0    | 0    | 1610  | 3333  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583  |  |
| Right Turn on Red   | Yes  |      |      | Yes   | Yes   | Yes  |      |      | Yes  | Yes  |      |       |  |
| Satd. Flow (RTOR)   |      |      |      | 179   | 153   |      |      |      |      |      |      | 608   |  |
| Link Speed (mph)    | 30   |      |      | 35    |       | 35   |      |      | 35   |      |      |       |  |
| Link Distance (ft)  | 430  |      |      | 163   |       | 280  |      |      | 1465 |      |      |       |  |
| Travel Time (s)     | 9.8  |      |      | 3.2   |       | 5.5  |      |      | 28.5 |      |      |       |  |

**Intersection Summary**

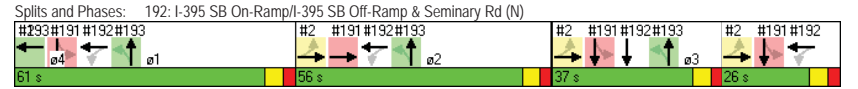
Area Type: Other

Timings 2035 Market with Traffic Mitigation  
AM PEAK  
192: I-395 SB On-Ramp/I-395 SB Off-Ramp & Seminary Rd (N)

| Lane Group           | WBL   | WBT   | SBT   | SBR   | ø1   | ø2   | ø4   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     |      |      |      |
| Volume (vph)         | 505   | 395   | 235   | 565   |      |      |      |
| Turn Type            | Perm  | NA    | NA    | Free  |      |      |      |
| Protected Phases     | 1 2 4 |       | 3     |       | 1    | 2    | 4    |
| Permitted Phases     | 1 2 4 |       | Free  |       |      |      |      |
| Detector Phase       | 1 2 4 |       | 3     |       |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  |       |       | 10.0  |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    |       |       | 22.5  |       | 22.5 | 22.5 | 23.0 |
| Total Split (s)      | 143.0 | 143.0 | 37.0  | 0.0   | 61.0 | 56.0 | 26.0 |
| Total Split (%)      | 79.4% | 79.4% | 20.6% | 0.0%  | 34%  | 31%  | 14%  |
| Yellow Time (s)      |       |       | 4.0   |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     |       |       | 2.5   |       | 2.5  | 2.5  | 3.0  |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | 0.0   |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             |       |       | Lead  |       | Lead | Lag  | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          |       |       | Min   |       | Min  | Min  | Min  |
| Act Effct Green (s)  | 139.0 | 139.0 | 33.0  | 180.0 |      |      |      |
| Actuated g/C Ratio   | 0.77  | 0.77  | 0.18  | 1.00  |      |      |      |
| v/c Ratio            | 0.25  | 0.25  | 0.39  | 0.38  |      |      |      |
| Control Delay        | 0.9   | 0.2   | 66.7  | 0.7   |      |      |      |
| Queue Delay          | 0.4   | 2.3   | 0.0   | 0.0   |      |      |      |
| Total Delay          | 1.3   | 2.5   | 66.8  | 0.7   |      |      |      |
| LOS                  | A     | A     | E     | A     |      |      |      |
| Approach Delay       | 2.1   |       | 20.1  |       |      |      |      |
| Approach LOS         | A     |       | C     |       |      |      |      |

**Intersection Summary**

Cycle Length: 180  
 Actuated Cycle Length: 180  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.25  
 Intersection Signal Delay: 10.6 Intersection LOS: B  
 Intersection Capacity Utilization 43.7% ICU Level of Service A  
 Analysis Period (min) 15



Phasings 2035 Market with Traffic Mitigation  
 192: I-395 SB On-Ramp/I-395 SB Off-Ramp & Seminary Rd (N) AM PEAK

| Lane Group              | WBL   | WBT   | SBT   | SBR  | ø1   | ø2   | ø4   |
|-------------------------|-------|-------|-------|------|------|------|------|
| Protected Phases        |       | 1 2 4 | 3     |      | 1    | 2    | 4    |
| Permitted Phases        | 1 2 4 |       |       | Free |      |      |      |
| Minimum Initial (s)     |       |       | 10.0  |      | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       |       |       | 22.5  |      | 22.5 | 22.5 | 23.0 |
| Total Split (s)         | 143.0 | 143.0 | 37.0  | 0.0  | 61.0 | 56.0 | 26.0 |
| Total Split (%)         | 79.4% | 79.4% | 20.6% | 0.0% | 34%  | 31%  | 14%  |
| Maximum Green (s)       |       |       | 30.5  |      | 54.5 | 49.5 | 19.0 |
| Yellow Time (s)         |       |       | 4.0   |      | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        |       |       | 2.5   |      | 2.5  | 2.5  | 3.0  |
| Lead/Lag                |       |       | Lead  |      | Lead | Lag  | Lag  |
| Lead-Lag Optimize?      |       |       |       |      |      |      |      |
| Vehicle Extension (s)   |       |       | 3.0   |      | 5.0  | 3.0  | 3.0  |
| Minimum Gap (s)         |       |       | 3.0   |      | 5.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  |       |       | 0.0   |      | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      |       |       | 0.0   |      | 0.0  | 0.0  | 0.0  |
| Recall Mode             |       |       | Min   |      | Min  | Min  | Min  |
| Walk Time (s)           |       |       |       |      |      |      |      |
| Flash Dont Walk (s)     |       |       |       |      |      |      |      |
| Pedestrian Calls (#/hr) |       |       |       |      |      |      |      |
| 90th %ile Green (s)     |       |       | 30.5  |      | 54.5 | 49.5 | 19.0 |
| 90th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |
| 70th %ile Green (s)     |       |       | 30.5  |      | 54.5 | 49.5 | 19.0 |
| 70th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |
| 50th %ile Green (s)     |       |       | 30.5  |      | 54.5 | 49.5 | 19.0 |
| 50th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |
| 30th %ile Green (s)     |       |       | 30.5  |      | 54.5 | 49.5 | 19.0 |
| 30th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |
| 10th %ile Green (s)     |       |       | 30.5  |      | 54.5 | 49.5 | 19.0 |
| 10th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |

| Intersection Summary                 |  |  |  |  |  |  |  |
|--------------------------------------|--|--|--|--|--|--|--|
| Cycle Length: 180                    |  |  |  |  |  |  |  |
| Actuated Cycle Length: 180           |  |  |  |  |  |  |  |
| Control Type: Actuated-Uncoordinated |  |  |  |  |  |  |  |
| 90th %ile Actuated Cycle: 180        |  |  |  |  |  |  |  |
| 70th %ile Actuated Cycle: 180        |  |  |  |  |  |  |  |
| 50th %ile Actuated Cycle: 180        |  |  |  |  |  |  |  |
| 30th %ile Actuated Cycle: 180        |  |  |  |  |  |  |  |
| 10th %ile Actuated Cycle: 180        |  |  |  |  |  |  |  |

Lanes and Geometrics 2035 Market with Traffic Mitigation  
 193: I-395 NB Off-Ramp/I-395 NB On-Ramp & Seminary Rd (N) AM PEAK

| Lane Group          | EBL  | EBT  | EBR  | WBL  | WBT  | WBR   | NBL   | NBT   | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|-------|-------|-------|------|------|------|------|
| Lane Configurations |      |      |      |      | ↑↑   | ↑↑    | ↑↑    | ↑↑    |      |      |      |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900  | 1900  | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12   | 12   | 12   | 12    | 12    | 12    | 12   | 12   | 12   | 12   |
| Grade (%)           |      | 0%   |      |      | 0%   |       |       | 0%    |      |      | 0%   |      |
| Storage Length (ft) | 0    |      | 0    | 0    |      | 125   | 0     |       | 0    | 0    |      | 0    |
| Storage Lanes       | 0    |      | 0    | 0    |      | 1     | 1     |       | 0    | 0    |      | 0    |
| Taper Length (ft)   | 50   |      |      | 50   |      |       | 50    |       |      | 50   |      |      |
| Lane Util. Factor   | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00  | 0.91  | 0.91  | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      |      |      |      |       |       |       |      |      |      |      |
| Frt                 |      |      |      |      |      | 0.850 |       |       |      |      |      |      |
| Flt Protected       |      |      |      |      |      |       | 0.950 | 0.972 |      |      |      |      |
| Satd. Flow (prot)   | 0    | 0    | 0    | 0    | 3539 | 1583  | 1610  | 3295  | 0    | 0    | 0    | 0    |
| Flt Permitted       |      |      |      |      |      |       | 0.950 | 0.972 |      |      |      |      |
| Satd. Flow (perm)   | 0    | 0    | 0    | 0    | 3539 | 1583  | 1610  | 3295  | 0    | 0    | 0    | 0    |
| Right Turn on Red   |      |      | Yes  |      |      | Yes   | Yes   |       | Yes  |      |      | Yes  |
| Satd. Flow (RTOR)   |      |      |      |      |      |       | 151   | 2     | 2    |      |      |      |
| Link Speed (mph)    |      | 35   |      |      | 35   |       |       |       | 35   |      |      | 35   |
| Link Distance (ft)  |      | 117  |      |      | 302  |       |       |       | 272  |      |      | 567  |
| Travel Time (s)     |      | 2.3  |      |      | 5.9  |       |       |       | 5.3  |      |      | 11.0 |

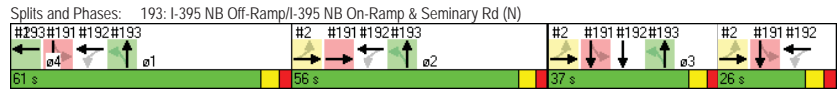
| Intersection Summary |       |
|----------------------|-------|
| Area Type:           | Other |

**Timings** 2035 Market with Traffic Mitigation  
AM PEAK  
193: I-395 NB Off-Ramp/I-395 NB On-Ramp & Seminary Rd (N)

| Lane Group           | WBT   | WBR   | NBL   | NBT   | ø1   | ø2   | ø3   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  | ↑↑    | ↑     | ↑     | ↑↑    |      |      |      |
| Volume (vph)         | 505   | 335   | 900   | 320   |      |      |      |
| Turn Type            | NA    | Free  | Perm  | NA    |      |      |      |
| Protected Phases     | 4     |       | 1 2 3 | 1 2 3 | 1    | 2    | 3    |
| Permitted Phases     |       | Free  | 1 2 3 |       |      |      |      |
| Detector Phase       | 4     |       | 1 2 3 | 1 2 3 |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  | 10.0  |       |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    | 23.0  |       |       |       | 22.5 | 22.5 | 22.5 |
| Total Split (s)      | 26.0  | 0.0   | 154.0 | 154.0 | 61.0 | 56.0 | 37.0 |
| Total Split (%)      | 14.4% | 0.0%  | 85.6% | 85.6% | 34%  | 31%  | 21%  |
| Yellow Time (s)      | 4.0   |       |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     | 3.0   |       |       |       | 2.5  | 2.5  | 2.5  |
| Lost Time Adjust (s) | -3.0  | 0.0   | -2.5  | -2.5  |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             | Lag   |       |       |       | Lead | Lag  | Lead |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          | Min   |       |       |       | Min  | Min  | Min  |
| Act Effct Green (s)  | 22.0  | 180.0 | 150.0 | 150.0 |      |      |      |
| Actuated g/C Ratio   | 0.12  | 1.00  | 0.83  | 0.83  |      |      |      |
| v/c Ratio            | 1.25  | 0.23  | 0.36  | 0.30  |      |      |      |
| Control Delay        | 191.8 | 0.3   | 1.5   | 18.2  |      |      |      |
| Queue Delay          | 0.0   | 0.0   | 20.7  | 0.1   |      |      |      |
| Total Delay          | 191.8 | 0.3   | 22.2  | 18.3  |      |      |      |
| LOS                  | F     | A     | C     | B     |      |      |      |
| Approach Delay       | 115.5 |       |       | 19.7  |      |      |      |
| Approach LOS         | F     |       |       | B     |      |      |      |

**Intersection Summary**

Cycle Length: 180  
 Actuated Cycle Length: 180  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.25  
 Intersection Signal Delay: 58.8  
 Intersection LOS: E  
 Intersection Capacity Utilization 78.0%  
 ICU Level of Service D  
 Analysis Period (min) 15



**Phasings** 2035 Market with Traffic Mitigation  
AM PEAK  
193: I-395 NB Off-Ramp/I-395 NB On-Ramp & Seminary Rd (N)

| Lane Group              | WBT   | WBR  | NBL   | NBT   | ø1   | ø2   | ø3   |
|-------------------------|-------|------|-------|-------|------|------|------|
| Protected Phases        | 4     |      |       | 1 2 3 | 1    | 2    | 3    |
| Permitted Phases        |       | Free | 1 2 3 |       |      |      |      |
| Minimum Initial (s)     | 10.0  |      |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       | 23.0  |      |       |       | 22.5 | 22.5 | 22.5 |
| Total Split (s)         | 26.0  | 0.0  | 154.0 | 154.0 | 61.0 | 56.0 | 37.0 |
| Total Split (%)         | 14.4% | 0.0% | 85.6% | 85.6% | 34%  | 31%  | 21%  |
| Maximum Green (s)       | 19.0  |      |       |       | 54.5 | 49.5 | 30.5 |
| Yellow Time (s)         | 4.0   |      |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        | 3.0   |      |       |       | 2.5  | 2.5  | 2.5  |
| Lead/Lag                | Lag   |      |       |       | Lead | Lag  | Lead |
| Lead-Lag Optimize?      |       |      |       |       |      |      |      |
| Vehicle Extension (s)   | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Minimum Gap (s)         | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Recall Mode             | Min   |      |       |       | Min  | Min  | Min  |
| Walk Time (s)           |       |      |       |       |      |      |      |
| Flash Dont Walk (s)     |       |      |       |       |      |      |      |
| Pedestrian Calls (#/hr) |       |      |       |       |      |      |      |
| 90th %ile Green (s)     | 19.0  |      |       |       | 54.5 | 49.5 | 30.5 |
| 90th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 70th %ile Green (s)     | 19.0  |      |       |       | 54.5 | 49.5 | 30.5 |
| 70th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 50th %ile Green (s)     | 19.0  |      |       |       | 54.5 | 49.5 | 30.5 |
| 50th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 30th %ile Green (s)     | 19.0  |      |       |       | 54.5 | 49.5 | 30.5 |
| 30th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 10th %ile Green (s)     | 19.0  |      |       |       | 54.5 | 49.5 | 30.5 |
| 10th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |

**Intersection Summary**

Cycle Length: 180  
 Actuated Cycle Length: 180  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 180  
 70th %ile Actuated Cycle: 180  
 50th %ile Actuated Cycle: 180  
 30th %ile Actuated Cycle: 180  
 10th %ile Actuated Cycle: 180

Lanes and Geometrics  
 1: N Pickett St/N Pickett St/Fire Station & Seminary Rd  
 PM PEAK

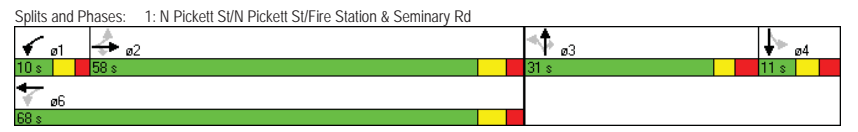
| Lane Group          | EBL  | EBT  | EBR   | WBL  | WBT   | WBR  | NBL  | NBT  | NBR   | SBL  | SBT  | SBR  |
|---------------------|------|------|-------|------|-------|------|------|------|-------|------|------|------|
| Lane Configurations |      | ↕↕   | ↕     |      | ↕↕    |      |      | ↕    | ↕     |      | ↕↕   |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900  | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12    | 12   | 12    | 12   | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           |      | 0%   |       |      | 0%    |      |      | 0%   |       |      | 0%   |      |
| Storage Length (ft) | 0    |      | 0     | 0    |       | 0    | 0    |      | 50    | 0    |      | 0    |
| Storage Lanes       | 0    |      | 1     | 0    |       | 0    | 0    |      | 1     | 0    |      | 0    |
| Taper Length (ft)   | 50   |      |       | 50   |       |      | 50   |      |       | 50   |      |      |
| Lane Util. Factor   | 0.95 | 0.95 | 1.00  | 0.95 | 0.95  | 0.95 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      |       |      |       |      |      |      | 0.98  |      |      |      |
| Frt                 |      |      | 0.850 |      |       |      |      |      | 0.850 |      |      |      |
| Flt Protected       |      |      |       |      | 0.995 |      |      |      | 0.950 |      |      |      |
| Satd. Flow (prot)   | 0    | 3539 | 1583  | 0    | 3522  | 0    | 0    | 1770 | 1583  | 0    | 1863 | 0    |
| Flt Permitted       |      |      |       |      | 0.502 |      |      |      | 0.950 |      |      |      |
| Satd. Flow (perm)   | 0    | 3539 | 1583  | 0    | 1777  | 0    | 0    | 1770 | 1556  | 0    | 1863 | 0    |
| Right Turn on Red   |      |      | Yes   |      |       | Yes  |      |      | Yes   |      |      | Yes  |
| Satd. Flow (RTOR)   |      |      | 154   |      |       |      |      |      | 65    |      |      |      |
| Link Speed (mph)    |      | 35   |       |      | 35    |      |      |      | 25    |      |      | 25   |
| Link Distance (ft)  |      | 317  |       |      | 744   |      |      |      | 657   |      |      | 269  |
| Travel Time (s)     |      | 6.2  |       |      | 14.5  |      |      |      | 17.9  |      |      | 7.3  |

Intersection Summary  
 Area Type: Other

Timings  
 1: N Pickett St/N Pickett St/Fire Station & Seminary Rd  
 PM PEAK

| Lane Group           | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | ø4   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations  | ↕↕    | ↕     |       | ↕↕    |       | ↕     | ↕     |      |
| Volume (vph)         | 1300  | 155   | 110   | 940   | 55    | 0     | 60    |      |
| Turn Type            | NA    | Perm  | pm+pt | NA    | Perm  | NA    | Perm  |      |
| Protected Phases     | 2     |       | 1     | 6     |       | 3     |       | 4    |
| Permitted Phases     |       | 2     | 6     |       | 3     |       | 3     |      |
| Detector Phase       | 2     | 2     | 1     | 6     | 3     | 3     | 3     |      |
| Switch Phase         |       |       |       |       |       |       |       |      |
| Minimum Initial (s)  | 10.0  | 10.0  | 5.0   | 10.0  | 7.0   | 7.0   | 7.0   | 5.0  |
| Minimum Split (s)    | 46.5  | 46.5  | 10.0  | 16.5  | 31.0  | 31.0  | 31.0  | 11.0 |
| Total Split (s)      | 58.0  | 58.0  | 10.0  | 68.0  | 31.0  | 31.0  | 31.0  | 11.0 |
| Total Split (%)      | 52.7% | 52.7% | 9.1%  | 61.8% | 28.2% | 28.2% | 28.2% | 10%  |
| Yellow Time (s)      | 4.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| All-Red Time (s)     | 2.5   | 2.5   | 2.0   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0  |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Total Lost Time (s)  | 6.5   | 6.5   | 5.0   | 6.5   | 6.0   | 6.0   | 6.0   | 6.0  |
| Lead/Lag             | Lag   | Lag   | Lead  |       | Lead  | Lead  | Lead  | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |      |
| Recall Mode          | C-Max | C-Max | Max   | C-Max | None  | None  | None  | None |
| Act Effct Green (s)  | 51.5  | 51.5  |       | 74.3  |       | 23.2  | 23.2  |      |
| Actuated g/C Ratio   | 0.47  | 0.47  |       | 0.68  |       | 0.21  | 0.21  |      |
| v/c Ratio            | 0.84  | 0.20  |       | 0.77  |       | 0.16  | 0.17  |      |
| Control Delay        | 24.1  | 1.8   |       | 11.7  |       | 35.5  | 9.6   |      |
| Queue Delay          | 0.6   | 0.4   |       | 0.0   |       | 0.0   | 0.0   |      |
| Total Delay          | 24.7  | 2.2   |       | 11.7  |       | 35.5  | 9.6   |      |
| LOS                  | C     | A     |       | B     |       | D     | A     |      |
| Approach Delay       | 22.3  |       |       | 11.7  |       | 21.9  |       |      |
| Approach LOS         | C     |       |       | B     |       | C     |       |      |

Intersection Summary  
 Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 96 (87%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  
 Natural Cycle: 130  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.84  
 Intersection Signal Delay: 18.0  
 Intersection LOS: B  
 Intersection Capacity Utilization 88.7%  
 ICU Level of Service E  
 Analysis Period (min) 15



Phasings

2035 Market with Traffic Mitigation

1: N Pickett St/N Pickett St/Fire Station & Seminary Rd

PM PEAK

|                         | →     | ↘     | ↙    | ←     | ↖     | ↗     | ↘     | ↙    |
|-------------------------|-------|-------|------|-------|-------|-------|-------|------|
| Lane Group              | EBT   | EBR   | WBL  | WBT   | NBL   | NBT   | NBR   | ø4   |
| Protected Phases        | 2     |       | 1    | 6     |       | 3     |       | 4    |
| Permitted Phases        |       | 2     | 6    |       | 3     |       | 3     |      |
| Minimum Initial (s)     | 10.0  | 10.0  | 5.0  | 10.0  | 7.0   | 7.0   | 7.0   | 5.0  |
| Minimum Split (s)       | 46.5  | 46.5  | 10.0 | 16.5  | 31.0  | 31.0  | 31.0  | 11.0 |
| Total Split (s)         | 58.0  | 58.0  | 10.0 | 68.0  | 31.0  | 31.0  | 31.0  | 11.0 |
| Total Split (%)         | 52.7% | 52.7% | 9.1% | 61.8% | 28.2% | 28.2% | 28.2% | 10%  |
| Maximum Green (s)       | 51.5  | 51.5  | 5.0  | 61.5  | 25.0  | 25.0  | 25.0  | 5.0  |
| Yellow Time (s)         | 4.0   | 4.0   | 3.0  | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| All-Red Time (s)        | 2.5   | 2.5   | 2.0  | 2.5   | 3.0   | 3.0   | 3.0   | 3.0  |
| Lead/Lag                | Lag   | Lag   | Lead |       | Lead  | Lead  | Lead  | Lag  |
| Lead-Lag Optimize?      |       |       |      |       |       |       |       |      |
| Vehicle Extension (s)   | 4.0   | 4.0   | 4.0  | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| Minimum Gap (s)         | 4.0   | 4.0   | 4.0  | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Recall Mode             | C-Max | C-Max | Max  | C-Max | None  | None  | None  | None |
| Walk Time (s)           | 22.0  | 22.0  |      |       | 7.0   | 7.0   | 7.0   |      |
| Flash Dont Walk (s)     | 18.0  | 18.0  |      |       | 18.0  | 18.0  | 18.0  |      |
| Pedestrian Calls (#/hr) | 0     | 0     |      |       | 0     | 0     | 0     |      |
| 90th %ile Green (s)     | 51.5  | 51.5  | 16.0 | 72.5  | 25.0  | 25.0  | 25.0  | 0.0  |
| 90th %ile Term Code     | Coord | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |
| 70th %ile Green (s)     | 51.5  | 51.5  | 16.0 | 72.5  | 25.0  | 25.0  | 25.0  | 0.0  |
| 70th %ile Term Code     | Coord | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |
| 50th %ile Green (s)     | 51.5  | 51.5  | 16.0 | 72.5  | 25.0  | 25.0  | 25.0  | 0.0  |
| 50th %ile Term Code     | Coord | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |
| 30th %ile Green (s)     | 51.5  | 51.5  | 16.0 | 72.5  | 25.0  | 25.0  | 25.0  | 0.0  |
| 30th %ile Term Code     | Coord | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |
| 10th %ile Green (s)     | 51.5  | 51.5  | 24.9 | 81.4  | 16.1  | 16.1  | 16.1  | 0.0  |
| 10th %ile Term Code     | Coord | Coord | MaxR | Coord | Gap   | Gap   | Gap   | Skip |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 96 (87%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

2035 Market with Traffic Mitigation

2: I-395 NB Off-Ramp & Seminary Rd (S)

PM PEAK

|                     | ↖     | →     | ↘    | ↙    | ←    | ↖    | ↗    | ↘    | ↙     | ↖    | ↗    | ↘    | ↙    |
|---------------------|-------|-------|------|------|------|------|------|------|-------|------|------|------|------|
| Lane Group          | EBL   | EBT   | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR   | SBL  | SBT  | SBR  |      |
| Lane Configurations | ↖ ↗   | ↖ ↗   |      |      |      |      |      | ↖ ↗  | ↖ ↗   |      |      |      |      |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12    | 12   | 12   | 12   | 12   |
| Grade (%)           |       | 0%    |      |      | 0%   |      |      | 0%   |       |      | 0%   |      |      |
| Storage Length (ft) | 0     |       | 0    | 0    |      | 0    | 0    |      | 600   | 0    |      | 0    | 0    |
| Storage Lanes       | 1     |       | 0    | 0    |      | 0    | 0    |      | 1     | 0    |      | 0    | 0    |
| Taper Length (ft)   | 50    |       |      | 50   |      |      | 50   |      |       | 50   |      |      |      |
| Lane Util. Factor   | 0.91  | 0.91  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor     |       |       |      |      |      |      |      |      | 0.850 |      |      |      |      |
| Flt Protected       | 0.950 | 0.986 |      |      |      |      |      |      | 3539  | 1583 | 0    | 0    | 0    |
| Satd. Flow (prot)   | 1610  | 3343  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583  | 0    | 0    | 0    | 0    |
| Flt Permitted       | 0.950 | 0.986 |      |      |      |      |      |      |       |      |      |      |      |
| Satd. Flow (perm)   | 1610  | 3343  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583  | 0    | 0    | 0    | 0    |
| Right Turn on Red   | Yes   |       | Yes  |      |      | Yes  |      |      | Yes   |      |      |      | Yes  |
| Satd. Flow (RTOR)   | 97    | 60    |      |      |      |      |      |      | 256   |      |      |      |      |
| Link Speed (mph)    |       | 35    |      |      | 35   |      |      |      |       |      |      | 35   |      |
| Link Distance (ft)  |       | 307   |      |      | 322  |      |      |      | 1292  |      |      | 272  |      |
| Travel Time (s)     |       | 6.0   |      |      | 6.3  |      |      |      | 25.2  |      |      | 5.3  |      |

Intersection Summary

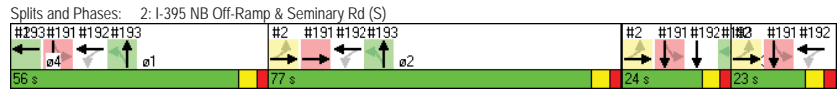
Area Type: Other

**Timings**  
**2: I-395 NB Off-Ramp & Seminary Rd (S)**

2035 Market with Traffic Mitigation  
 PM PEAK

| Lane Group           | EBL   | EBT   | NBT   | NBR   | ø2   | ø3   | ø4   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  | ↘     | ↗     | ↑     | ↙     |      |      |      |
| Volume (vph)         | 725   | 690   | 490   | 430   |      |      |      |
| Turn Type            | Perm  | NA    | NA    | Perm  |      |      |      |
| Protected Phases     | 2 3 4 |       | 1     |       | 2    | 3    | 4    |
| Permitted Phases     | 2 3 4 |       |       | 1     |      |      |      |
| Detector Phase       | 2 3 4 |       | 1     | 1     |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  |       |       | 10.0  | 10.0  | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    |       |       | 22.5  | 22.5  | 22.5 | 22.5 | 23.0 |
| Total Split (s)      | 124.0 | 124.0 | 56.0  | 56.0  | 77.0 | 24.0 | 23.0 |
| Total Split (%)      | 68.9% | 68.9% | 31.1% | 31.1% | 43%  | 13%  | 13%  |
| Yellow Time (s)      |       |       | 4.0   | 4.0   | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     |       |       | 2.5   | 2.5   | 2.5  | 2.5  | 3.0  |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | -2.5  |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             |       |       | Lead  | Lead  | Lag  | Lead | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          |       |       | Min   | Min   | Min  | Min  | Min  |
| Act Effct Green (s)  | 120.0 | 120.0 | 52.0  | 52.0  |      |      |      |
| Actuated g/C Ratio   | 0.67  | 0.67  | 0.29  | 0.29  |      |      |      |
| v/c Ratio            | 0.45  | 0.45  | 0.52  | 0.72  |      |      |      |
| Control Delay        | 0.7   | 23.7  | 55.6  | 31.9  |      |      |      |
| Queue Delay          | 1.6   | 4.5   | 0.3   | 0.0   |      |      |      |
| Total Delay          | 2.4   | 28.2  | 55.9  | 31.9  |      |      |      |
| LOS                  | A     | C     | E     | C     |      |      |      |
| Approach Delay       | 19.7  |       | 44.7  |       |      |      |      |
| Approach LOS         | B     |       | D     |       |      |      |      |

| Intersection Summary               |                        |
|------------------------------------|------------------------|
| Cycle Length:                      | 180                    |
| Actuated Cycle Length:             | 180                    |
| Natural Cycle:                     | 105                    |
| Control Type:                      | Actuated-Uncoordinated |
| Maximum v/c Ratio:                 | 0.81                   |
| Intersection Signal Delay:         | 29.5                   |
| Intersection LOS:                  | C                      |
| Intersection Capacity Utilization: | 62.9%                  |
| ICU Level of Service:              | B                      |
| Analysis Period (min):             | 15                     |



**Phasings**  
**2: I-395 NB Off-Ramp & Seminary Rd (S)**

2035 Market with Traffic Mitigation  
 PM PEAK

| Lane Group              | EBL   | EBT   | NBT   | NBR   | ø2   | ø3   | ø4   |
|-------------------------|-------|-------|-------|-------|------|------|------|
| Protected Phases        | 2 3 4 |       | 1     |       | 2    | 3    | 4    |
| Permitted Phases        | 2 3 4 |       |       | 1     |      |      |      |
| Minimum Initial (s)     |       |       | 10.0  | 10.0  | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       |       |       | 22.5  | 22.5  | 22.5 | 22.5 | 23.0 |
| Total Split (s)         | 124.0 | 124.0 | 56.0  | 56.0  | 77.0 | 24.0 | 23.0 |
| Total Split (%)         | 68.9% | 68.9% | 31.1% | 31.1% | 43%  | 13%  | 13%  |
| Maximum Green (s)       |       |       | 49.5  | 49.5  | 70.5 | 17.5 | 16.0 |
| Yellow Time (s)         |       |       | 4.0   | 4.0   | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        |       |       | 2.5   | 2.5   | 2.5  | 2.5  | 3.0  |
| Lead/Lag                |       |       | Lead  | Lead  | Lag  | Lead | Lag  |
| Lead-Lag Optimize?      |       |       |       |       |      |      |      |
| Vehicle Extension (s)   |       |       | 5.0   | 5.0   | 3.0  | 3.0  | 3.0  |
| Minimum Gap (s)         |       |       | 5.0   | 5.0   | 3.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  |       |       | 0.0   | 0.0   | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      |       |       | 0.0   | 0.0   | 0.0  | 0.0  | 0.0  |
| Recall Mode             |       |       | Min   | Min   | Min  | Min  | Min  |
| Walk Time (s)           |       |       |       |       |      |      |      |
| Flash Dont Walk (s)     |       |       |       |       |      |      |      |
| Pedestrian Calls (#/hr) |       |       |       |       |      |      |      |
| 90th %ile Green (s)     |       |       | 49.5  | 49.5  | 70.5 | 17.5 | 16.0 |
| 90th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 70th %ile Green (s)     |       |       | 49.5  | 49.5  | 70.5 | 17.5 | 16.0 |
| 70th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 50th %ile Green (s)     |       |       | 49.5  | 49.5  | 70.5 | 17.5 | 16.0 |
| 50th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 30th %ile Green (s)     |       |       | 49.5  | 49.5  | 70.5 | 17.5 | 16.0 |
| 30th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 10th %ile Green (s)     |       |       | 49.5  | 49.5  | 70.5 | 17.5 | 16.0 |
| 10th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |

| Intersection Summary      |                        |
|---------------------------|------------------------|
| Cycle Length:             | 180                    |
| Actuated Cycle Length:    | 180                    |
| Control Type:             | Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: | 180                    |
| 70th %ile Actuated Cycle: | 180                    |
| 50th %ile Actuated Cycle: | 180                    |
| 30th %ile Actuated Cycle: | 180                    |
| 10th %ile Actuated Cycle: | 180                    |

Lanes and Geometrics  
3: Seminary Rd (S)/Seminary Rd (N) & Seminary Rd

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL  | EBT  | EBR   | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR   |
|---------------------|------|------|-------|------|------|------|------|------|------|------|------|-------|
| Lane Configurations |      | ↑↑   | ↑↑    |      | ↑↑   |      |      |      |      |      |      | ↑↑    |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12   | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12    |
| Grade (%)           |      | 0%   |       |      | 0%   |      |      | 0%   |      |      | 0%   |       |
| Storage Length (ft) | 0    |      | 0     | 0    |      | 0    | 0    |      | 0    | 0    |      | 0     |
| Storage Lanes       | 0    |      | 2     | 0    |      | 0    | 0    |      | 0    | 0    |      | 2     |
| Taper Length (ft)   | 50   |      |       | 50   |      |      | 50   |      |      | 50   |      |       |
| Lane Util. Factor   | 1.00 | 0.95 | 0.88  | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88  |
| Ped Bike Factor     |      |      |       |      |      |      |      |      |      |      |      |       |
| Frt                 |      |      | 0.850 |      |      |      |      |      |      |      |      | 0.850 |
| Flt Protected       |      |      |       |      |      |      |      |      |      |      |      |       |
| Satd. Flow (prot)   | 0    | 3539 | 2787  | 0    | 3539 | 0    | 0    | 0    | 0    | 0    | 0    | 2787  |
| Flt Permitted       |      |      |       |      |      |      |      |      |      |      |      |       |
| Satd. Flow (perm)   | 0    | 3539 | 2787  | 0    | 3539 | 0    | 0    | 0    | 0    | 0    | 0    | 2787  |
| Link Speed (mph)    |      | 35   |       |      | 35   |      |      | 35   |      |      |      | 35    |
| Link Distance (ft)  |      | 387  |       |      | 818  |      |      | 331  |      |      |      | 287   |
| Travel Time (s)     |      | 7.5  |       |      | 15.9 |      |      | 6.4  |      |      |      | 5.6   |

**Intersection Summary**  
Area Type: Other

Lanes and Geometrics  
7: Beauregard St/S Walter Reed Dr & King St

2035 Market with Traffic Mitigation  
PM PEAK

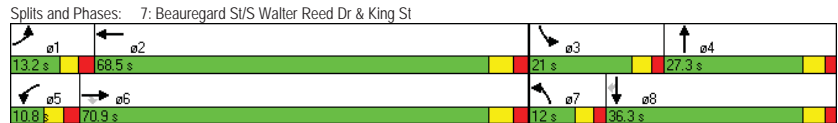
| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT  | SBR   |
|---------------------|-------|------|-------|-------|-------|------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↑↑    | ↑↑   | ↑     | ↑↑    | ↑↑    | ↑↑   |       |       |      |       |      | ↑↑    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12   | 12    |
| Grade (%)           |       | 0%   |       |       | 0%    |      |       | 0%    |      |       | 0%   |       |
| Storage Length (ft) | 230   |      | 100   | 225   |       | 0    | 400   |       | 0    | 160   |      | 140   |
| Storage Lanes       | 2     |      | 1     | 2     |       | 0    | 2     |       | 0    | 1     |      | 1     |
| Taper Length (ft)   | 140   |      |       | 140   |       |      | 50    |       |      | 50    |      |       |
| Lane Util. Factor   | 0.97  | 0.95 | 1.00  | 0.97  | 0.95  | 0.95 | 0.97  | 0.95  | 0.95 | 1.00  | 0.95 | 1.00  |
| Ped Bike Factor     |       |      | 0.97  |       | 1.00  |      |       | 0.99  |      |       |      | 0.98  |
| Frt                 |       |      | 0.850 |       | 0.987 |      |       | 0.969 |      |       |      | 0.850 |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (prot)   | 3433  | 3539 | 1583  | 3433  | 3487  | 0    | 3433  | 3412  | 0    | 1770  | 3539 | 1583  |
| Flt Permitted       | 0.950 |      |       | 0.950 |       |      | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (perm)   | 3433  | 3539 | 1541  | 3433  | 3487  | 0    | 3433  | 3412  | 0    | 1770  | 3539 | 1556  |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |       |       | Yes  |       |      | Yes   |
| Satd. Flow (RTOR)   |       |      | 86    |       | 10    |      |       | 23    |      |       |      | 100   |
| Link Speed (mph)    |       | 35   |       |       | 35    |      |       | 35    |      |       |      | 35    |
| Link Distance (ft)  |       | 1357 |       |       | 1477  |      |       | 1439  |      |       |      | 1148  |
| Travel Time (s)     |       | 26.4 |       |       | 28.8  |      |       | 28.0  |      |       |      | 22.4  |

**Intersection Summary**  
Area Type: Other

**Timings** 2035 Market with Traffic Mitigation  
 7: Beauregard St/S Walter Reed Dr & King St PM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL  | WBT   | NBL  | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|------|-------|------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↔    | ↕     | ↔    | ↕     | ↔     | ↕     | ↔     |
| Volume (vph)         | 125   | 1605  | 265   | 105  | 1170  | 270  | 435   | 200   | 750   | 165   |
| Turn Type            | Prot  | NA    | Perm  | Prot | NA    | Prot | NA    | Prot  | NA    | Perm  |
| Protected Phases     | 1     | 6     |       | 5    | 2     | 7    | 4     | 3     | 8     |       |
| Permitted Phases     |       |       | 6     |      |       |      |       |       |       | 8     |
| Detector Phase       | 1     | 6     | 6     | 5    | 2     | 7    | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |      |       |      |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 10.0  | 10.0  | 4.0  | 10.0  | 6.5  | 7.0   | 3.5   | 7.0   | 7.0   |
| Minimum Split (s)    | 9.5   | 27.5  | 27.5  | 9.5  | 27.5  | 12.0 | 26.5  | 9.0   | 26.5  | 26.5  |
| Total Split (s)      | 13.2  | 70.9  | 70.9  | 10.8 | 68.5  | 12.0 | 27.3  | 21.0  | 36.3  | 36.3  |
| Total Split (%)      | 10.2% | 54.5% | 54.5% | 8.3% | 52.7% | 9.2% | 21.0% | 16.2% | 27.9% | 27.9% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0  | 4.0   | 3.0  | 3.5   | 3.0   | 3.5   | 3.5   |
| All-Red Time (s)     | 2.5   | 2.5   | 2.5   | 2.5  | 2.5   | 2.0  | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | -5.0 | -5.0  | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.5   | 6.5   | 6.5   | 5.5  | 6.5   | 0.0  | 0.5   | 5.0   | 5.5   | 5.5   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead | Lag   | Lead | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |      |       |      |       |       |       |       |
| Recall Mode          | None  | Min   | Min   | None | Min   | None | Min   | None  | Min   | Min   |
| Act Effct Green (s)  | 7.7   | 64.4  | 64.4  | 5.3  | 62.0  | 12.0 | 26.8  | 16.0  | 30.8  | 30.8  |
| Actuated g/C Ratio   | 0.06  | 0.50  | 0.50  | 0.04 | 0.48  | 0.09 | 0.21  | 0.12  | 0.24  | 0.24  |
| v/c Ratio            | 0.66  | 0.98  | 0.35  | 0.81 | 0.82  | 0.91 | 0.82  | 0.99  | 0.96  | 0.40  |
| Control Delay        | 75.9  | 50.6  | 15.0  | 99.3 | 34.3  | 91.3 | 57.8  | 114.2 | 72.1  | 21.2  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 75.9  | 50.6  | 15.0  | 99.3 | 34.3  | 91.3 | 57.8  | 114.2 | 72.1  | 21.2  |
| LOS                  | E     | D     | B     | F    | C     | F    | E     | F     | E     | C     |
| Approach Delay       |       | 47.5  |       |      | 39.3  |      | 68.8  |       | 72.2  |       |
| Approach LOS         |       | D     |       |      | D     |      | E     |       | E     |       |

**Intersection Summary**  
 Cycle Length: 130  
 Actuated Cycle Length: 130  
 Natural Cycle: 120  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.99  
 Intersection Signal Delay: 53.8  
 Intersection LOS: D  
 Intersection Capacity Utilization 94.1%  
 ICU Level of Service F  
 Analysis Period (min) 15



**Phasings** 2035 Market with Traffic Mitigation  
 7: Beauregard St/S Walter Reed Dr & King St PM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBL  | WBT   | NBL  | NBT   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|------|-------|------|-------|-------|-------|-------|
| Protected Phases        | 1     | 6     |       | 5    | 2     | 7    | 4     | 3     | 8     |       |
| Permitted Phases        |       |       | 6     |      |       |      |       |       |       | 8     |
| Minimum Initial (s)     | 4.0   | 10.0  | 10.0  | 4.0  | 10.0  | 6.5  | 7.0   | 3.5   | 7.0   | 7.0   |
| Minimum Split (s)       | 9.5   | 27.5  | 27.5  | 9.5  | 27.5  | 12.0 | 26.5  | 9.0   | 26.5  | 26.5  |
| Total Split (s)         | 13.2  | 70.9  | 70.9  | 10.8 | 68.5  | 12.0 | 27.3  | 21.0  | 36.3  | 36.3  |
| Total Split (%)         | 10.2% | 54.5% | 54.5% | 8.3% | 52.7% | 9.2% | 21.0% | 16.2% | 27.9% | 27.9% |
| Maximum Green (s)       | 7.7   | 64.4  | 64.4  | 5.3  | 62.0  | 7.0  | 21.8  | 16.0  | 30.8  | 30.8  |
| Yellow Time (s)         | 3.0   | 4.0   | 4.0   | 3.0  | 4.0   | 3.0  | 3.5   | 3.0   | 3.5   | 3.5   |
| All-Red Time (s)        | 2.5   | 2.5   | 2.5   | 2.5  | 2.5   | 2.0  | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead  | Lag   | Lag   | Lead | Lag   | Lead | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?      |       |       |       |      |       |      |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | Min   | Min   | None | Min   | None | Min   | None  | Min   | Min   |
| Walk Time (s)           | 7.0   | 7.0   |       | 7.0  |       | 7.0  |       | 7.0   |       | 7.0   |
| Flash Dont Walk (s)     | 14.0  | 14.0  |       | 14.0 |       | 14.0 |       | 14.0  |       | 14.0  |
| Pedestrian Calls (#/hr) | 0     | 0     |       | 0    |       | 0    |       | 0     |       | 0     |
| 90th %ile Green (s)     | 7.7   | 64.4  | 64.4  | 5.3  | 62.0  | 7.0  | 21.8  | 16.0  | 30.8  | 30.8  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max  | Max   | Max  | Max   | Max   | Max   | Max   |
| 70th %ile Green (s)     | 7.7   | 64.4  | 64.4  | 5.3  | 62.0  | 7.0  | 21.8  | 16.0  | 30.8  | 30.8  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max  | Max   | Max  | Max   | Max   | Max   | Max   |
| 50th %ile Green (s)     | 7.7   | 64.4  | 64.4  | 5.3  | 62.0  | 7.0  | 21.8  | 16.0  | 30.8  | 30.8  |
| 50th %ile Term Code     | Max   | Max   | Max   | Max  | Hold  | Max  | Max   | Max   | Max   | Max   |
| 30th %ile Green (s)     | 7.7   | 64.4  | 64.4  | 5.3  | 62.0  | 7.0  | 21.8  | 16.0  | 30.8  | 30.8  |
| 30th %ile Term Code     | Max   | Max   | Max   | Max  | Hold  | Max  | Max   | Max   | Max   | Max   |
| 10th %ile Green (s)     | 7.6   | 64.4  | 64.4  | 5.3  | 62.1  | 7.0  | 21.8  | 16.0  | 30.8  | 30.8  |
| 10th %ile Term Code     | Gap   | Max   | Max   | Max  | Hold  | Max  | Hold  | Max   | Max   | Max   |

**Intersection Summary**  
 Cycle Length: 130  
 Actuated Cycle Length: 130  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 130  
 70th %ile Actuated Cycle: 130  
 50th %ile Actuated Cycle: 130  
 30th %ile Actuated Cycle: 130  
 10th %ile Actuated Cycle: 130



Lanes and Geometrics  
9: Beauregard St & Braddock Rd

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT  | WBR   | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|-------|------|-------|------|-------|-------|------|-------|-------|-------|------|
| Lane Configurations | ↔     | ↔     | ↔    | ↔     | ↔    | ↔     | ↔     | ↔    | ↔     | ↔     | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           |       | -6%   |      |       | -4%  |       |       | -2%  |       |       | 2%    |      |
| Storage Length (ft) | 100   |       | 0    | 200   |      | 60    | 80    |      | 100   | 200   |       | 0    |
| Storage Lanes       | 1     |       | 0    | 1     |      | 1     | 1     |      | 1     | 1     |       | 0    |
| Taper Length (ft)   | 50    |       |      | 50    |      |       | 50    |      |       | 50    |       |      |
| Lane Util. Factor   | 1.00  | 0.95  | 0.95 | 1.00  | 0.95 | 1.00  | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 0.95 |
| Ped Bike Factor     |       |       |      |       |      |       |       |      |       |       | 1.00  |      |
| Frt                 |       | 0.994 |      |       |      | 0.850 |       |      | 0.850 |       | 0.997 |      |
| Flt Protected       | 0.950 |       |      | 0.950 |      |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (prot)   | 1823  | 3624  | 0    | 1805  | 3610 | 1615  | 1787  | 3575 | 1599  | 1752  | 3491  | 0    |
| Flt Permitted       | 0.488 |       |      | 0.670 |      |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (perm)   | 936   | 3624  | 0    | 1273  | 3610 | 1615  | 1787  | 3575 | 1599  | 1752  | 3491  | 0    |
| Right Turn on Red   |       |       | Yes  |       |      | Yes   |       |      | Yes   |       |       | Yes  |
| Satd. Flow (RTOR)   |       | 3     |      |       |      | 170   |       |      | 151   |       | 2     |      |
| Link Speed (mph)    |       | 35    |      |       |      | 35    |       |      | 35    |       | 35    |      |
| Link Distance (ft)  |       | 755   |      |       | 1840 |       |       | 1125 |       |       | 1439  |      |
| Travel Time (s)     |       | 14.7  |      |       | 35.8 |       |       | 21.9 |       |       | 28.0  |      |

Intersection Summary

Area Type: Other

Timings  
9: Beauregard St & Braddock Rd

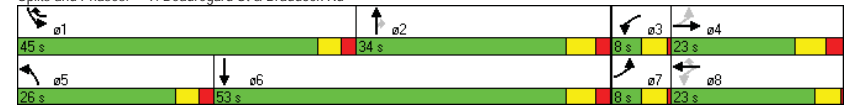
2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 60    | 115   | 40    | 135   | 305   | 155   | 455   | 165   | 325   | 780   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+ov | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 7     | 4     | 3     | 8     | 1     | 5     | 2     |       | 1     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 8     |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 3     | 8     | 1     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 7.0   | 4.0   | 4.0   | 6.0   | 6.0   | 10.0  | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)    | 8.0   | 22.5  | 8.0   | 20.0  | 11.0  | 11.0  | 26.0  | 26.0  | 11.0  | 26.0  |
| Total Split (s)      | 8.0   | 23.0  | 8.0   | 23.0  | 45.0  | 26.0  | 34.0  | 34.0  | 45.0  | 53.0  |
| Total Split (%)      | 7.3%  | 20.9% | 7.3%  | 20.9% | 40.9% | 23.6% | 30.9% | 30.9% | 40.9% | 48.2% |
| Yellow Time (s)      | 3.5   | 4.0   | 3.5   | 3.5   | 3.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 0.5   | 2.5   | 0.5   | 0.5   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | -2.5  | 0.0   | -1.0  | -2.0  | 0.0   | -1.0  | -2.0  |
| Total Lost Time (s)  | 1.5   | 4.0   | 1.5   | 1.5   | 5.0   | 4.0   | 6.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |
| Act Effct Green (s)  | 19.8  | 13.4  | 19.5  | 14.3  | 43.8  | 16.5  | 50.8  | 48.8  | 29.0  | 63.2  |
| Actuated g/C Ratio   | 0.18  | 0.12  | 0.18  | 0.13  | 0.40  | 0.15  | 0.46  | 0.44  | 0.26  | 0.57  |
| v/c Ratio            | 0.29  | 0.29  | 0.17  | 0.31  | 0.44  | 0.62  | 0.30  | 0.22  | 0.76  | 0.43  |
| Control Delay        | 38.7  | 44.1  | 19.6  | 26.7  | 9.4   | 43.8  | 25.3  | 13.5  | 47.3  | 15.6  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 38.7  | 44.1  | 19.6  | 26.7  | 9.4   | 43.8  | 25.3  | 13.5  | 47.3  | 15.6  |
| LOS                  | D     | D     | B     | C     | A     | D     | C     | B     | D     | B     |
| Approach Delay       |       | 42.3  |       | 15.1  |       |       | 26.5  |       |       | 24.8  |
| Approach LOS         |       | D     |       | B     |       |       | C     |       |       | C     |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 35 (32%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.76  
 Intersection Signal Delay: 24.7  
 Intersection LOS: C  
 Intersection Capacity Utilization 53.2%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 9: Beauregard St & Braddock Rd



Phasings

2035 Market with Traffic Mitigation

9: Beauregard St & Braddock Rd

PM PEAK



| Lane Group              | EBL  | EBT   | WBL  | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 7    | 4     | 3    | 8     | 1     | 5     | 2     |       | 1     | 6     |
| Permitted Phases        | 4    |       | 8    |       | 8     |       |       | 2     |       |       |
| Minimum Initial (s)     | 4.0  | 7.0   | 4.0  | 4.0   | 6.0   | 6.0   | 10.0  | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)       | 8.0  | 22.5  | 8.0  | 20.0  | 11.0  | 11.0  | 26.0  | 26.0  | 11.0  | 26.0  |
| Total Split (s)         | 8.0  | 23.0  | 8.0  | 23.0  | 45.0  | 26.0  | 34.0  | 34.0  | 45.0  | 53.0  |
| Total Split (%)         | 7.3% | 20.9% | 7.3% | 20.9% | 40.9% | 23.6% | 30.9% | 30.9% | 40.9% | 48.2% |
| Maximum Green (s)       | 4.0  | 16.5  | 4.0  | 19.0  | 40.0  | 21.0  | 28.0  | 28.0  | 40.0  | 47.0  |
| Yellow Time (s)         | 3.5  | 4.0   | 3.5  | 3.5   | 3.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 0.5  | 2.5   | 0.5  | 0.5   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead | Lag   | Lead | Lag   | Lead  | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |      |       |      |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0  | 2.0   | 3.0  | 3.0   | 3.0   | 3.0   | 0.2   | 0.2   | 3.0   | 0.2   |
| Minimum Gap (s)         | 3.0  | 2.0   | 3.0  | 3.0   | 3.0   | 3.0   | 0.2   | 0.2   | 3.0   | 0.2   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | None  | None | None  | None  | None  | C-Max | C-Max | None  | C-Max |
| Walk Time (s)           | 4.0  |       |      | 5.0   |       |       | 7.0   | 7.0   |       | 7.0   |
| Flash Dont Walk (s)     |      | 12.0  |      | 11.0  |       |       | 13.0  | 13.0  |       | 13.0  |
| Pedestrian Calls (#/hr) |      | 5     |      | 0     |       |       | 5     | 5     |       | 5     |
| 90th %ile Green (s)     | 4.0  | 16.0  | 4.0  | 18.5  | 37.1  | 21.0  | 31.4  | 31.4  | 37.1  | 47.5  |
| 90th %ile Term Code     | Max  | Ped   | Max  | Hold  | Gap   | Max   | Coord | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 4.0  | 9.2   | 4.0  | 11.7  | 31.8  | 17.9  | 43.5  | 43.5  | 31.8  | 57.4  |
| 70th %ile Term Code     | Max  | Gap   | Max  | Hold  | Gap   | Gap   | Coord | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 4.0  | 8.2   | 4.0  | 10.7  | 28.3  | 15.6  | 48.0  | 48.0  | 28.3  | 60.7  |
| 50th %ile Term Code     | Max  | Gap   | Max  | Hold  | Gap   | Gap   | Coord | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 4.0  | 14.2  | 0.0  | 8.7   | 24.0  | 13.3  | 54.3  | 54.3  | 24.0  | 65.0  |
| 30th %ile Term Code     | Max  | Hold  | Skip | Gap   | Gap   | Gap   | Coord | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 0.0  | 7.0   | 0.0  | 9.5   | 18.8  | 9.9   | 66.7  | 66.7  | 18.8  | 75.6  |
| 10th %ile Term Code     | Skip | Min   | Skip | Hold  | Gap   | Gap   | Coord | Coord | Gap   | Coord |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 35 (32%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

2035 Market with Traffic Mitigation

10: Beauregard St & Fillmore Ave

PM PEAK



| Lane Group          | EBL  | EBT   | EBR  | WBL   | WBT  | WBR   | NBL  | NBT   | NBR  | SBL   | SBT  | SBR  |
|---------------------|------|-------|------|-------|------|-------|------|-------|------|-------|------|------|
| Lane Configurations |      | ↕     | ↕    |       | ↕    |       | ↕    | ↕     |      | ↕     | ↕    | ↕    |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12    | 12   | 12    | 12   | 12    | 12   | 12    | 12   | 12    | 12   | 12   |
| Grade (%)           |      | -3%   |      |       | -3%  |       |      | -4%   |      |       | 3%   |      |
| Storage Length (ft) | 0    |       | 150  | 0     |      | 0     | 200  |       | 0    | 75    |      | 0    |
| Storage Lanes       | 0    |       | 1    | 0     |      | 0     | 1    |       | 0    | 1     |      | 0    |
| Taper Length (ft)   | 50   |       |      | 50    |      |       | 50   |       |      | 50    |      |      |
| 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     |      | 0.98  |      | 1.00  |      | 1.00  |      | 1.00  |      | 1.00  |      | 1.00 |
| Frt                 |      | 0.850 |      | 0.965 |      | 0.994 |      | 0.986 |      |       |      |      |
| Flt Protected       |      | 0.960 |      | 0.969 |      | 0.950 |      | 0.950 |      | 0.950 |      |      |
| Satd. Flow (prot)   | 0    | 1815  | 1607 | 0     | 1760 | 0     | 1805 | 3585  | 0    | 1743  | 3424 | 0    |
| Flt Permitted       |      | 0.722 |      | 0.775 |      | 0.950 |      | 0.950 |      | 0.950 |      |      |
| Satd. Flow (perm)   | 0    | 1365  | 1572 | 0     | 1407 | 0     | 1805 | 3585  | 0    | 1743  | 3424 | 0    |
| Right Turn on Red   |      |       | Yes  |       |      | Yes   |      |       | Yes  |       |      | Yes  |
| Satd. Flow (RTOR)   |      |       | 108  |       | 17   |       |      | 6     |      |       | 13   |      |
| Link Speed (mph)    |      | 25    |      |       | 25   |       |      | 35    |      |       | 35   |      |
| Link Distance (ft)  |      | 507   |      |       | 309  |       |      | 809   |      |       | 1125 |      |
| Travel Time (s)     |      | 13.8  |      |       | 8.4  |       |      | 15.8  |      |       | 21.9 |      |

Intersection Summary

Area Type: Other

Timings  
10: Beauregard St & Fillmore Ave

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       | ↕     | ↕     |       | ↕     | ↕     | ↕     | ↕     | ↕     |
| Volume (vph)         | 50    | 10    | 135   | 60    | 10    | 65    | 700   | 20    | 730   |
| Turn Type            | Perm  | NA    | pm+ov | Perm  | NA    | Prot  | NA    | Prot  | NA    |
| Protected Phases     |       | 4     | 5     |       | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       |       | 4     |       |       |       |       |       |
| Detector Phase       | 4     | 4     | 5     | 4     | 4     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 14.0  | 14.0  | 6.0   | 14.0  | 14.0  | 6.0   | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)    | 33.0  | 33.0  | 11.0  | 33.0  | 33.0  | 11.0  | 16.0  | 11.0  | 16.0  |
| Total Split (s)      | 37.0  | 37.0  | 17.0  | 37.0  | 37.0  | 17.0  | 60.0  | 13.0  | 56.0  |
| Total Split (%)      | 33.6% | 33.6% | 15.5% | 33.6% | 33.6% | 15.5% | 54.5% | 11.8% | 50.9% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.0  | -2.0  | -1.0  | -2.0  | -2.0  | -1.0  | -2.0  | -1.0  | -2.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             |       |       | Lead  |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |       |
| Act Effct Green (s)  | 18.6  | 28.4  |       | 18.6  | 9.8   | 78.4  | 7.6   | 69.6  |       |
| Actuated g/C Ratio   | 0.17  | 0.26  |       | 0.17  | 0.09  | 0.71  | 0.07  | 0.63  |       |
| v/c Ratio            | 0.28  | 0.30  |       | 0.41  | 0.43  | 0.31  | 0.18  | 0.40  |       |
| Control Delay        | 41.7  | 9.6   |       | 37.8  | 50.2  | 6.2   | 69.4  | 2.2   |       |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Total Delay          | 41.7  | 9.6   |       | 37.8  | 50.2  | 6.2   | 69.4  | 2.2   |       |
| LOS                  | D     | A     |       | D     | A     | E     | A     | A     |       |
| Approach Delay       | 19.6  |       |       | 37.8  |       | 9.8   |       | 3.8   |       |
| Approach LOS         | B     |       |       | D     |       | A     |       | A     |       |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 36 (33%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.43  
 Intersection Signal Delay: 9.6  
 Intersection LOS: A  
 Intersection Capacity Utilization 55.3%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 10: Beauregard St & Fillmore Ave



Phasings  
10: Beauregard St & Fillmore Ave

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 4     | 5     |       | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases        | 4     |       |       | 4     |       |       |       |       |       |
| Minimum Initial (s)     | 14.0  | 14.0  | 6.0   | 14.0  | 14.0  | 6.0   | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)       | 33.0  | 33.0  | 11.0  | 33.0  | 33.0  | 11.0  | 16.0  | 11.0  | 16.0  |
| Total Split (s)         | 37.0  | 37.0  | 17.0  | 37.0  | 37.0  | 17.0  | 60.0  | 13.0  | 56.0  |
| Total Split (%)         | 33.6% | 33.6% | 15.5% | 33.6% | 33.6% | 15.5% | 54.5% | 11.8% | 50.9% |
| Maximum Green (s)       | 31.0  | 31.0  | 12.0  | 31.0  | 31.0  | 12.0  | 54.0  | 8.0   | 50.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       | Lead  |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.2   | 2.0   | 0.2   |
| Minimum Gap (s)         | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.2   | 2.0   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Walk Time (s)           | 4.0   | 4.0   |       | 4.0   | 4.0   |       |       |       |       |
| Flash Dont Walk (s)     | 23.0  | 23.0  |       | 23.0  | 23.0  |       |       |       |       |
| Pedestrian Calls (#/hr) | 5     | 5     |       | 5     | 5     |       |       |       |       |
| 90th %ile Green (s)     | 27.0  | 27.0  | 12.0  | 27.0  | 27.0  | 12.0  | 58.0  | 8.0   | 54.0  |
| 90th %ile Term Code     | Ped   | Ped   | Max   | Ped   | Ped   | Max   | Coord | Max   | Coord |
| 70th %ile Green (s)     | 14.0  | 14.0  | 10.2  | 14.0  | 14.0  | 10.2  | 72.2  | 6.8   | 68.8  |
| 70th %ile Term Code     | Min   | Min   | Gap   | Min   | Min   | Gap   | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 14.0  | 14.0  | 8.7   | 14.0  | 14.0  | 8.7   | 84.0  | 0.0   | 70.3  |
| 50th %ile Term Code     | Min   | Min   | Gap   | Min   | Min   | Gap   | Coord | Skip  | Coord |
| 30th %ile Green (s)     | 14.0  | 14.0  | 7.2   | 14.0  | 14.0  | 7.2   | 84.0  | 0.0   | 71.8  |
| 30th %ile Term Code     | Min   | Min   | Gap   | Min   | Min   | Gap   | Coord | Skip  | Coord |
| 10th %ile Green (s)     | 14.0  | 14.0  | 6.0   | 14.0  | 14.0  | 6.0   | 84.0  | 0.0   | 73.0  |
| 10th %ile Term Code     | Min   | Min   | Min   | Min   | Min   | Min   | Coord | Skip  | Coord |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 36 (33%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
11: Mark Center Dr & Seminary Rd

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT  | WBR   | NBL   | NBT  | NBR   | SBL   | SBT  | SBR   |
|---------------------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|
| Lane Configurations | ↔     | ↔↔↔  | ↔     | ↔     | ↔↔↔  | ↔     | ↔     | ↔    | ↔↔↔   | ↔     | ↔    | ↔     |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   | 12    |
| Grade (%)           |       | 0%   |       |       | -1%  |       |       | 0%   |       |       | 0%   |       |
| Storage Length (ft) | 225   |      | 400   | 0     |      | 200   | 250   |      | 250   | 150   |      | 150   |
| Storage Lanes       | 1     |      | 1     | 1     |      | 1     | 1     |      | 2     | 1     |      | 1     |
| Taper Length (ft)   | 50    |      |       | 50    |      |       | 50    |      |       | 50    |      |       |
| Lane Util. Factor   | 1.00  | 0.91 | 1.00  | 1.00  | 0.91 | 1.00  | 1.00  | 1.00 | 0.76  | 0.97  | 1.00 | 1.00  |
| Ped Bike Factor     |       |      |       |       |      |       |       |      |       |       |      | 0.99  |
| Frt                 |       |      | 0.850 |       |      | 0.850 |       |      | 0.850 |       |      | 0.850 |
| Flt Protected       | 0.950 |      |       | 0.950 |      |       | 0.950 |      |       | 0.950 |      |       |
| Satd. Flow (prot)   | 1770  | 5085 | 1583  | 1778  | 5111 | 1591  | 1770  | 1863 | 3610  | 3433  | 1863 | 1583  |
| Flt Permitted       | 0.950 |      |       | 0.950 |      |       | 0.950 |      |       | 0.950 |      |       |
| Satd. Flow (perm)   | 1770  | 5085 | 1583  | 1778  | 5111 | 1591  | 1770  | 1863 | 3610  | 3433  | 1863 | 1562  |
| Right Turn on Red   |       |      | Yes   |       |      | Yes   |       |      | No    |       |      | Yes   |
| Satd. Flow (RTOR)   |       |      | 59    |       |      | 142   |       |      |       |       |      | 213   |
| Link Speed (mph)    |       | 35   |       |       | 35   |       |       | 25   |       |       |      | 25    |
| Link Distance (ft)  |       | 692  |       |       | 387  |       |       | 791  |       |       |      | 642   |
| Travel Time (s)     |       | 13.5 |       |       | 7.5  |       |       | 21.6 |       |       |      | 17.5  |

Intersection Summary

Area Type: Other

Timings  
11: Mark Center Dr & Seminary Rd

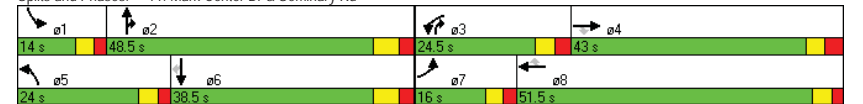
2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔↔   | ↔     | ↔     | ↔↔↔   | ↔     | ↔     | ↔     | ↔↔↔   | ↔     | ↔     | ↔     |
| Volume (vph)         | 80    | 1500  | 55    | 120   | 1155  | 155   | 275   | 75    | 1375  | 210   | 85    | 200   |
| Turn Type            | Prot  | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    | pt+ov | Prot  | NA    | Perm  |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     | 2 3   | 1     | 6     |       |
| Permitted Phases     |       |       | 4     |       |       | 8     |       |       |       |       |       | 6     |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 2 3   | 1     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 7.0   | 7.0   | 10.0  | 4.0   | 4.0   | 4.0   | 10.0  |       | 4.0   | 10.0  | 10.0  |
| Minimum Split (s)    | 9.0   | 13.0  | 13.0  | 24.5  | 29.0  | 29.0  | 9.0   | 25.5  |       | 9.0   | 38.5  | 38.5  |
| Total Split (s)      | 16.0  | 43.0  | 43.0  | 24.5  | 51.5  | 51.5  | 24.0  | 48.5  | 73.0  | 14.0  | 38.5  | 38.5  |
| Total Split (%)      | 12.3% | 33.1% | 33.1% | 18.8% | 39.6% | 39.6% | 18.5% | 37.3% | 56.2% | 10.8% | 29.6% | 29.6% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   |       | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 3.0   | 3.0   | 2.5   | 2.0   | 2.0   | 2.0   | 2.5   |       | 2.0   | 2.5   | 2.5   |
| Lost Time Adjust (s) | -1.5  | -2.5  | 0.0   | -1.5  | -2.5  | 0.0   | -2.0  | -2.0  | -1.5  | -1.5  | -1.5  | -1.5  |
| Total Lost Time (s)  | 3.5   | 3.5   | 6.0   | 4.0   | 2.5   | 5.0   | 3.0   | 4.5   | 5.0   | 3.5   | 5.0   | 5.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |       | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Max | C-Max | None  | C-Max | C-Max | None  | None  |       | None  | Max   | Max   |
| Act Effct Green (s)  | 11.5  | 42.9  | 40.4  | 17.1  | 50.0  | 47.5  | 21.0  | 44.0  | 64.6  | 10.5  | 33.5  | 33.5  |
| Actuated g/C Ratio   | 0.09  | 0.33  | 0.31  | 0.13  | 0.38  | 0.37  | 0.16  | 0.34  | 0.50  | 0.08  | 0.26  | 0.26  |
| v/c Ratio            | 0.55  | 0.96  | 0.11  | 0.55  | 0.63  | 0.25  | 1.03  | 0.13  | 0.82  | 0.82  | 0.19  | 0.38  |
| Control Delay        | 62.3  | 67.8  | 23.7  | 61.2  | 34.5  | 7.6   | 115.3 | 30.5  | 32.2  | 81.5  | 39.0  | 7.2   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 62.3  | 67.8  | 23.7  | 61.2  | 34.5  | 7.6   | 115.3 | 30.5  | 32.2  | 81.5  | 39.0  | 7.2   |
| LOS                  | E     | E     | C     | E     | C     | A     | F     | C     | C     | F     | D     | A     |
| Approach Delay       |       | 66.1  |       |       | 33.8  |       |       | 45.4  |       |       | 44.2  |       |
| Approach LOS         |       | E     |       |       | C     |       |       | D     |       |       | D     |       |

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 107 (82%), Referenced to phase 4:EBT and 8:WBT, Start of Green  
 Natural Cycle: 130  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.03  
 Intersection Signal Delay: 48.5  
 Intersection LOS: D  
 Intersection Capacity Utilization 78.0%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 11: Mark Center Dr & Seminary Rd



Phasings  
11: Mark Center Dr & Seminary Rd

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 7     | 4     |       | 3     | 8     |       | 5     | 2     | 23    | 1     | 6     |       |
| Permitted Phases        |       |       | 4     |       |       | 8     |       |       |       |       |       | 6     |
| Minimum Initial (s)     | 4.0   | 7.0   | 7.0   | 10.0  | 4.0   | 4.0   | 4.0   | 10.0  |       | 4.0   | 10.0  | 10.0  |
| Minimum Split (s)       | 9.0   | 13.0  | 13.0  | 24.5  | 29.0  | 29.0  | 9.0   | 25.5  |       | 9.0   | 38.5  | 38.5  |
| Total Split (s)         | 16.0  | 43.0  | 43.0  | 24.5  | 51.5  | 51.5  | 24.0  | 48.5  | 73.0  | 14.0  | 38.5  | 38.5  |
| Total Split (%)         | 12.3% | 33.1% | 33.1% | 18.8% | 39.6% | 39.6% | 18.5% | 37.3% | 56.2% | 10.8% | 29.6% | 29.6% |
| Maximum Green (s)       | 11.0  | 37.0  | 37.0  | 19.0  | 46.5  | 46.5  | 19.0  | 42.0  |       | 9.0   | 32.0  | 32.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   |       | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 2.0   | 3.0   | 3.0   | 2.5   | 2.0   | 2.0   | 2.0   | 2.5   |       | 2.0   | 2.5   | 2.5   |
| Lead/Lag                | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |       | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   | 3.0   | 0.2   |       | 3.0   | 0.2   | 0.2   |
| Minimum Gap (s)         | 3.0   | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   | 3.0   | 0.2   |       | 3.0   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | C-Max | C-Max | None  | C-Max | C-Max | None  | None  |       | None  | Max   | Max   |
| Walk Time (s)           |       |       |       |       | 7.0   | 7.0   |       |       |       |       | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |       |       |       | 17.0  | 17.0  |       |       |       |       | 25.0  | 25.0  |
| Pedestrian Calls (#/hr) |       |       |       |       | 0     | 0     |       |       |       |       | 0     | 0     |
| 90th %ile Green (s)     | 11.0  | 37.0  | 37.0  | 19.0  | 46.5  | 46.5  | 19.0  | 42.0  |       | 9.0   | 32.0  | 32.0  |
| 90th %ile Term Code     | Max   | Coord | Coord | Max   | Coord | Coord | Max   | Max   |       | Max   | MaxR  | MaxR  |
| 70th %ile Green (s)     | 11.0  | 37.1  | 37.1  | 18.9  | 46.5  | 46.5  | 19.0  | 42.0  |       | 9.0   | 32.0  | 32.0  |
| 70th %ile Term Code     | Max   | Coord | Coord | Gap   | Coord | Coord | Max   | Max   |       | Max   | MaxR  | MaxR  |
| 50th %ile Green (s)     | 11.0  | 39.4  | 39.4  | 16.6  | 46.5  | 46.5  | 19.0  | 42.0  |       | 9.0   | 32.0  | 32.0  |
| 50th %ile Term Code     | Max   | Coord | Coord | Gap   | Coord | Coord | Max   | Max   |       | Max   | MaxR  | MaxR  |
| 30th %ile Green (s)     | 9.9   | 42.5  | 42.5  | 13.5  | 47.6  | 47.6  | 19.0  | 42.0  |       | 9.0   | 32.0  | 32.0  |
| 30th %ile Term Code     | Gap   | Coord | Coord | Gap   | Coord | Coord | Max   | Max   |       | Max   | MaxR  | MaxR  |
| 10th %ile Green (s)     | 7.2   | 45.8  | 45.8  | 10.2  | 50.3  | 50.3  | 19.0  | 42.0  |       | 9.0   | 32.0  | 32.0  |
| 10th %ile Term Code     | Gap   | Coord | Coord | Gap   | Coord | Coord | Max   | Hold  |       | Max   | MaxR  | MaxR  |

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 107 (82%), Referenced to phase 4:EBT and 8:WBT, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
13: Echols Ave & Seminary Rd

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR   |
|---------------------|-------|------|------|-------|-------|------|------|-------|------|------|------|-------|
| Lane Configurations |       |      |      |       |       |      |      |       |      |      |      |       |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12   | 12   | 12    | 12   | 12   | 12   | 12    |
| Grade (%)           |       | -1%  |      |       | 1%    |      |      | 0%    |      |      | 0%   |       |
| Storage Length (ft) | 100   |      | 0    | 150   |       | 0    | 0    |       | 0    | 0    | 0    | 0     |
| Storage Lanes       | 1     |      | 0    | 1     |       | 0    | 0    |       | 0    | 0    | 0    | 0     |
| Taper Length (ft)   | 50    |      |      | 50    |       |      | 50   |       |      | 50   |      |       |
| 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  |
| Ped Bike Factor     |       |      |      |       |       |      |      |       |      |      |      | 0.99  |
| Frt                 |       |      |      |       | 0.998 |      |      | 0.886 |      |      |      | 0.958 |
| Flt Protected       | 0.950 |      |      | 0.950 |       |      |      | 0.992 |      |      |      | 0.967 |
| Satd. Flow (prot)   | 1778  | 3557 | 0    | 1761  | 3514  | 0    | 0    | 1637  | 0    | 0    | 1716 | 0     |
| Flt Permitted       | 0.162 |      |      | 0.088 |       |      |      | 0.992 |      |      |      | 0.967 |
| Satd. Flow (perm)   | 303   | 3557 | 0    | 163   | 3514  | 0    | 0    | 1637  | 0    | 0    | 1716 | 0     |
| Right Turn on Red   |       |      | Yes  |       |       | Yes  |      |       | Yes  |      |      | Yes   |
| Satd. Flow (RTOR)   |       |      |      |       | 1     |      |      | 59    |      |      | 5    |       |
| Link Speed (mph)    |       | 35   |      |       | 35    |      |      | 25    |      |      | 25   |       |
| Link Distance (ft)  |       | 996  |      |       | 564   |      |      | 704   |      |      | 795  |       |
| Travel Time (s)     |       | 19.4 |      |       | 11.0  |      |      | 19.2  |      |      | 21.7 |       |

Intersection Summary

Area Type: Other

**Timings**  
13: Echols Ave & Seminary Rd

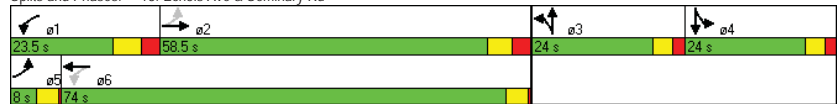
2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBT   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↕     | ↕     |
| Volume (vph)         | 5     | 1455  | 85    | 1345  | 0     | 0     |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | NA    | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     | 3     | 4     |
| Permitted Phases     | 2     |       | 6     |       |       |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 3     | 4     |
| Switch Phase         |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 6.0   | 10.0  | 4.0   | 7.0   | 7.0   |
| Minimum Split (s)    | 8.0   | 13.0  | 23.5  | 20.0  | 24.0  | 24.0  |
| Total Split (s)      | 8.0   | 58.5  | 23.5  | 74.0  | 24.0  | 24.0  |
| Total Split (%)      | 6.2%  | 45.0% | 18.1% | 56.9% | 18.5% | 18.5% |
| Yellow Time (s)      | 3.5   | 4.0   | 4.5   | 3.5   | 3.0   | 3.0   |
| All-Red Time (s)     | 0.5   | 3.0   | 3.0   | 0.5   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -3.5  | -3.5  | -3.0  | -3.5  | -1.0  | -1.0  |
| Total Lost Time (s)  | 0.5   | 3.5   | 4.5   | 0.5   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | None  |
| Act Effct Green (s)  | 97.5  | 85.7  | 103.4 | 105.9 | 10.9  | 10.4  |
| Actuated g/C Ratio   | 0.75  | 0.66  | 0.80  | 0.81  | 0.08  | 0.08  |
| v/c Ratio            | 0.02  | 0.67  | 0.30  | 0.51  | 0.36  | 0.11  |
| Control Delay        | 5.4   | 13.3  | 5.9   | 7.3   | 21.9  | 42.5  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 5.4   | 13.3  | 5.9   | 7.3   | 21.9  | 42.5  |
| LOS                  | A     | B     | A     | A     | C     | D     |
| Approach Delay       |       | 13.3  |       | 7.2   | 21.9  | 42.5  |
| Approach LOS         |       | B     |       | A     | C     | D     |

**Intersection Summary**

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 74 (57%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 125  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.67  
 Intersection Signal Delay: 10.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 65.8%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 13: Echols Ave & Seminary Rd



**Phasings**  
13: Echols Ave & Seminary Rd

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBL  | EBT   | WBL   | WBT   | NBT   | SBT   |
|-------------------------|------|-------|-------|-------|-------|-------|
| Protected Phases        | 5    | 2     | 1     | 6     | 3     | 4     |
| Permitted Phases        | 2    |       | 6     |       |       |       |
| Minimum Initial (s)     | 4.0  | 6.0   | 10.0  | 4.0   | 7.0   | 7.0   |
| Minimum Split (s)       | 8.0  | 13.0  | 23.5  | 20.0  | 24.0  | 24.0  |
| Total Split (s)         | 8.0  | 58.5  | 23.5  | 74.0  | 24.0  | 24.0  |
| Total Split (%)         | 6.2% | 45.0% | 18.1% | 56.9% | 18.5% | 18.5% |
| Maximum Green (s)       | 4.0  | 51.5  | 16.0  | 70.0  | 19.0  | 19.0  |
| Yellow Time (s)         | 3.5  | 4.0   | 4.5   | 3.5   | 3.0   | 3.0   |
| All-Red Time (s)        | 0.5  | 3.0   | 3.0   | 0.5   | 2.0   | 2.0   |
| Lead/Lag                | Lead | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |      |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0  | 2.0   | 0.2   | 3.0   | 4.0   | 2.0   |
| Minimum Gap (s)         | 3.0  | 2.0   | 0.2   | 3.0   | 4.0   | 2.0   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | C-Min | None  | C-Min | None  | None  |
| Walk Time (s)           |      |       | 4.0   | 5.0   | 4.0   | 4.0   |
| Flash Dont Walk (s)     |      |       | 12.0  | 11.0  | 15.0  | 15.0  |
| Pedestrian Calls (#/hr) |      |       | 5     | 0     | 5     | 5     |
| 90th %ile Green (s)     | 4.0  | 51.5  | 16.0  | 70.0  | 19.0  | 19.0  |
| 90th %ile Term Code     | Max  | Coord | Ped   | Coord | Ped   | Ped   |
| 70th %ile Green (s)     | 0.0  | 79.2  | 10.0  | 99.7  | 9.3   | 7.0   |
| 70th %ile Term Code     | Skip | Coord | Min   | Coord | Gap   | Min   |
| 50th %ile Green (s)     | 0.0  | 81.1  | 10.0  | 101.6 | 7.4   | 7.0   |
| 50th %ile Term Code     | Skip | Coord | Min   | Coord | Gap   | Min   |
| 30th %ile Green (s)     | 0.0  | 93.5  | 10.0  | 114.0 | 7.0   | 0.0   |
| 30th %ile Term Code     | Skip | Coord | Min   | Coord | Min   | Skip  |
| 10th %ile Green (s)     | 0.0  | 105.5 | 10.0  | 126.0 | 0.0   | 0.0   |
| 10th %ile Term Code     | Skip | Coord | Min   | Coord | Skip  | Skip  |

**Intersection Summary**

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 74 (57%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
14: Dawes Ave & Seminary Rd

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT   | NBR   | SBL  | SBT   | SBR  |
|---------------------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|------|
| Lane Configurations | ↔     | ↕    | ↔     | ↔     | ↕     | ↔    | ↔     | ↕     | ↔     | ↔    | ↕     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |      | 0%    |       | 0%    |      | 0%    |       | 0%    |      | 0%    |      |
| Storage Length (ft) | 240   |      | 0     | 55    |       | 0    | 0     |       | 0     | 0    |       | 0    |
| Storage Lanes       | 1     |      | 0     | 1     |       | 0    | 0     |       | 0     | 0    |       | 1    |
| Taper Length (ft)   | 50    |      |       | 50    |       |      | 50    |       |       | 50   |       |      |
| 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 |
| Ped Bike Factor     | 1.00  |      | 1.00  |       | 0.99  |      | 0.99  |       | 0.97  |      | 0.97  |      |
| Frt                 | 0.999 |      | 0.994 |       | 0.932 |      | 0.932 |       | 0.850 |      | 0.850 |      |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      |       | 0.985 |       |      | 0.963 |      |
| Satd. Flow (prot)   | 1770  | 3535 | 0     | 1770  | 3515  | 0    | 0     | 1692  | 0     | 0    | 1794  | 1583 |
| Flt Permitted       | 0.189 |      |       | 0.124 |       |      |       | 0.894 |       |      | 0.745 |      |
| Satd. Flow (perm)   | 352   | 3535 | 0     | 231   | 3515  | 0    | 0     | 1536  | 0     | 0    | 1388  | 1530 |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |       |       | Yes   |      |       | Yes  |
| Satd. Flow (RTOR)   |       |      |       |       | 7     |      |       | 27    |       |      |       | 54   |
| Link Speed (mph)    |       | 35   |       |       | 35    |      |       | 25    |       |      |       | 25   |
| Link Distance (ft)  |       | 294  |       |       | 996   |      |       | 786   |       |      |       | 1290 |
| Travel Time (s)     |       | 5.7  |       |       | 19.4  |      |       | 21.4  |       |      |       | 35.2 |

Intersection Summary

Area Type: Other

Timings  
14: Dawes Ave & Seminary Rd

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↔     |
| Volume (vph)         | 35    | 1355  | 155   | 1155  | 15    | 10    | 80    | 25    | 50    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | NA    | Perm  |
| Protected Phases     | 5     | 2     | 1     | 6     |       | 4     |       | 4     |       |
| Permitted Phases     | 2     |       | 6     |       | 4     |       | 4     |       | 4     |
| Detector Phase       | 5     | 2     | 1     | 6     | 4     | 4     | 4     | 4     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 10.0  | 4.0   | 10.0  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)    | 9.0   | 30.0  | 9.0   | 16.0  | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  |
| Total Split (s)      | 9.0   | 81.0  | 20.0  | 92.0  | 29.0  | 29.0  | 29.0  | 29.0  | 29.0  |
| Total Split (%)      | 6.9%  | 62.3% | 15.4% | 70.8% | 22.3% | 22.3% | 22.3% | 22.3% | 22.3% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | -1.0  | -2.0  | -1.0  | -2.0  | -2.0  | -2.0  | -2.0  | -2.0  | -2.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 96.1  | 91.1  | 104.8 | 97.9  | 16.9  | 16.9  | 16.9  | 16.9  | 16.9  |
| Actuated g/C Ratio   | 0.74  | 0.70  | 0.81  | 0.75  | 0.13  | 0.13  | 0.13  | 0.13  | 0.13  |
| v/c Ratio            | 0.12  | 0.59  | 0.55  | 0.49  | 0.24  | 0.24  | 0.63  | 0.22  | 0.22  |
| Control Delay        | 4.6   | 12.4  | 26.0  | 1.2   | 30.5  | 68.1  | 14.0  | 14.0  | 14.0  |
| Queue Delay          | 0.0   | 0.6   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 4.6   | 13.0  | 26.0  | 1.2   | 30.5  | 68.1  | 14.0  | 14.0  | 14.0  |
| LOS                  | A     | B     | C     | A     | C     | E     | B     | B     | B     |
| Approach Delay       |       | 12.8  |       | 4.0   | 30.5  | 50.6  |       |       |       |
| Approach LOS         |       | B     |       | A     | C     | D     |       |       |       |

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 62 (48%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.63  
 Intersection Signal Delay: 11.0  
 Intersection LOS: B  
 Intersection Capacity Utilization 70.3%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 14: Dawes Ave & Seminary Rd



Phasings  
14: Dawes Ave & Seminary Rd

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBL  | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|-------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 5    | 2     | 1     | 6     |       | 4     |       | 4     |       |
| Permitted Phases        | 2    |       | 6     |       | 4     |       | 4     |       | 4     |
| Minimum Initial (s)     | 4.0  | 10.0  | 4.0   | 10.0  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)       | 9.0  | 30.0  | 9.0   | 16.0  | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  |
| Total Split (s)         | 9.0  | 81.0  | 20.0  | 92.0  | 29.0  | 29.0  | 29.0  | 29.0  | 29.0  |
| Total Split (%)         | 6.9% | 62.3% | 15.4% | 70.8% | 22.3% | 22.3% | 22.3% | 22.3% | 22.3% |
| Maximum Green (s)       | 4.0  | 75.0  | 15.0  | 86.0  | 23.0  | 23.0  | 23.0  | 23.0  | 23.0  |
| Yellow Time (s)         | 3.0  | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0  | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead | Lag   | Lead  | Lag   |       |       |       |       |       |
| Lead-Lag Optimize?      |      |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0  | 0.2   | 2.0   | 0.2   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Minimum Gap (s)         | 2.0  | 0.2   | 2.0   | 0.2   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | C-Max | None  | C-Max | None  | None  | None  | None  | None  |
| Walk Time (s)           | 4.0  |       |       |       | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Flash Dont Walk (s)     |      | 20.0  |       |       | 17.0  | 17.0  | 17.0  | 17.0  | 17.0  |
| Pedestrian Calls (#/hr) |      | 5     |       |       | 5     | 5     | 5     | 5     | 5     |
| 90th %ile Green (s)     | 4.0  | 77.0  | 14.6  | 87.6  | 21.4  | 21.4  | 21.4  | 21.4  | 21.4  |
| 90th %ile Term Code     | Max  | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Gap   | Gap   |
| 70th %ile Green (s)     | 4.0  | 84.7  | 10.8  | 91.5  | 17.5  | 17.5  | 17.5  | 17.5  | 17.5  |
| 70th %ile Term Code     | Max  | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Gap   | Gap   |
| 50th %ile Green (s)     | 4.0  | 89.9  | 8.2   | 94.1  | 14.9  | 14.9  | 14.9  | 14.9  | 14.9  |
| 50th %ile Term Code     | Max  | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Gap   | Gap   |
| 30th %ile Green (s)     | 4.0  | 94.5  | 6.3   | 96.8  | 12.2  | 12.2  | 12.2  | 12.2  | 12.2  |
| 30th %ile Term Code     | Max  | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Gap   | Gap   |
| 10th %ile Green (s)     | 0.0  | 99.3  | 5.4   | 109.7 | 8.3   | 8.3   | 8.3   | 8.3   | 8.3   |
| 10th %ile Term Code     | Skip | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Gap   | Gap   |

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 130  
 Offset: 62 (48%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
15: Beauregard St & Mark Center Dr

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT  | WBR   | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|-------|------|-------|------|-------|-------|------|-------|-------|-------|------|
| Lane Configurations |       |       |      |       |      |       |       |      |       |       |       |      |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           |       | 0%    |      |       | 0%   |       |       | 0%   |       |       | 0%    |      |
| Storage Length (ft) | 0     |       | 0    | 0     |      | 200   | 190   |      | 200   | 0     |       | 0    |
| Storage Lanes       | 1     |       | 0    | 1     |      | 1     | 1     |      | 1     | 0     |       | 0    |
| Taper Length (ft)   | 50    |       |      | 50    |      |       | 50    |      |       | 50    |       |      |
| Lane Util. Factor   | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00  | 0.91 | 1.00  | 0.97  | 0.95  | 0.95 |
| Ped Bike Factor     |       |       |      |       |      | 0.99  |       |      |       |       | 1.00  |      |
| Frt                 |       | 0.917 |      |       |      | 0.850 |       |      | 0.850 |       | 0.974 |      |
| Flt Protected       | 0.950 |       |      | 0.950 |      |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (prot)   | 1770  | 1708  | 0    | 1770  | 1863 | 1583  | 1770  | 5085 | 1583  | 3433  | 3436  | 0    |
| Flt Permitted       | 0.754 |       |      | 0.725 |      |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (perm)   | 1405  | 1708  | 0    | 1350  | 1863 | 1562  | 1770  | 5085 | 1583  | 3433  | 3436  | 0    |
| Right Turn on Red   |       |       | Yes  |       |      | Yes   |       |      | Yes   |       |       | Yes  |
| Satd. Flow (RTOR)   |       | 27    |      |       |      | 116   |       |      | 54    |       | 35    |      |
| Link Speed (mph)    |       | 25    |      |       | 25   |       |       | 35   |       |       | 35    |      |
| Link Distance (ft)  |       | 275   |      |       | 957  |       |       | 796  |       |       | 762   |      |
| Travel Time (s)     |       | 7.5   |      |       | 26.1 |       |       | 15.5 |       |       | 14.8  |      |

Intersection Summary

Area Type: Other



Timings  
15: Beauregard St & Mark Center Dr

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Volume (vph)         | 335   | 20    | 330   | 5     | 155   | 5     | 1105  | 50    | 155   | 1310  |
| Turn Type            | Perm  | NA    | Perm  | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     |       | 4     |       | 4     |       | 5     | 2     |       | 1     | 6     |
| Permitted Phases     | 4     |       | 4     |       | 4     |       |       | 2     |       |       |
| Detector Phase       | 4     | 4     | 4     | 4     | 4     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 4.0   | 10.0  | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 33.0  | 33.0  | 33.0  | 33.0  | 33.0  | 9.0   | 24.0  | 24.0  | 9.0   | 24.0  |
| Total Split (s)      | 39.0  | 39.0  | 39.0  | 39.0  | 39.0  | 9.0   | 57.0  | 57.0  | 14.0  | 62.0  |
| Total Split (%)      | 35.5% | 35.5% | 35.5% | 35.5% | 35.5% | 8.2%  | 51.8% | 51.8% | 12.7% | 56.4% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.0  | -2.0  | -2.0  | -2.0  | 0.0   | -1.0  | -2.0  | 0.0   | -1.0  | -2.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 6.0   | 4.0   | 4.0   | 6.0   | 4.0   | 4.0   |
| Lead/Lag             |       |       |       |       |       | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |       |
| Act Effct Green (s)  | 32.6  | 32.6  | 32.6  | 32.6  | 30.6  | 5.0   | 55.9  | 53.9  | 9.5   | 67.6  |
| Actuated g/C Ratio   | 0.30  | 0.30  | 0.30  | 0.30  | 0.28  | 0.05  | 0.51  | 0.49  | 0.09  | 0.61  |
| v/c Ratio            | 0.86  | 0.09  | 0.89  | 0.01  | 0.32  | 0.06  | 0.46  | 0.07  | 0.56  | 0.80  |
| Control Delay        | 57.5  | 15.2  | 61.1  | 25.8  | 12.1  | 60.4  | 14.0  | 4.2   | 56.0  | 21.0  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.5   |
| Total Delay          | 57.5  | 15.2  | 61.1  | 25.8  | 12.1  | 60.4  | 14.0  | 4.2   | 56.0  | 21.4  |
| LOS                  | E     | B     | E     | C     | B     | E     | B     | A     | E     | C     |
| Approach Delay       |       | 52.4  |       | 45.3  |       |       | 13.8  |       |       | 24.5  |
| Approach LOS         |       | D     |       | D     |       |       | B     |       |       | C     |

**Intersection Summary**  
 Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 42 (38%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.89  
 Intersection Signal Delay: 26.7  
 Intersection LOS: C  
 Intersection Capacity Utilization 83.8%  
 ICU Level of Service E  
 Analysis Period (min) 15



Phasings  
15: Beauregard St & Mark Center Dr

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| Protected Phases        |       | 4     |       | 4     |       | 5    | 2     |       | 1     | 6     |
| Permitted Phases        | 4     |       | 4     |       | 4     |      |       | 2     |       |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 4.0  | 10.0  | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)       | 33.0  | 33.0  | 33.0  | 33.0  | 33.0  | 9.0  | 24.0  | 24.0  | 9.0   | 24.0  |
| Total Split (s)         | 39.0  | 39.0  | 39.0  | 39.0  | 39.0  | 9.0  | 57.0  | 57.0  | 14.0  | 62.0  |
| Total Split (%)         | 35.5% | 35.5% | 35.5% | 35.5% | 35.5% | 8.2% | 51.8% | 51.8% | 12.7% | 56.4% |
| Maximum Green (s)       | 33.0  | 33.0  | 33.0  | 33.0  | 33.0  | 4.0  | 51.0  | 51.0  | 9.0   | 56.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0  | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       |       | Lead | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |      |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0  | 0.2   | 0.2   | 2.0   | 0.2   |
| Minimum Gap (s)         | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0  | 0.2   | 0.2   | 2.0   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None | C-Max | C-Max | None  | C-Max |
| Walk Time (s)           | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |      | 6.0   | 6.0   |       | 6.0   |
| Flash Dont Walk (s)     | 19.0  | 19.0  | 19.0  | 19.0  | 19.0  |      | 12.0  | 12.0  |       | 12.0  |
| Pedestrian Calls (#/hr) | 5     | 5     | 5     | 5     | 5     |      | 5     | 5     |       | 5     |
| 90th %ile Green (s)     | 33.0  | 33.0  | 33.0  | 33.0  | 33.0  | 4.0  | 51.0  | 51.0  | 9.0   | 56.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max  | Coord | Coord | Max   | Coord |
| 70th %ile Green (s)     | 33.0  | 33.0  | 33.0  | 33.0  | 33.0  | 0.0  | 51.0  | 51.0  | 9.0   | 65.0  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Skip | Coord | Coord | Max   | Coord |
| 50th %ile Green (s)     | 33.0  | 33.0  | 33.0  | 33.0  | 33.0  | 0.0  | 51.0  | 51.0  | 9.0   | 65.0  |
| 50th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Skip | Coord | Coord | Max   | Coord |
| 30th %ile Green (s)     | 30.6  | 30.6  | 30.6  | 30.6  | 30.6  | 0.0  | 53.8  | 53.8  | 8.6   | 67.4  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Skip | Coord | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 23.5  | 23.5  | 23.5  | 23.5  | 23.5  | 0.0  | 62.7  | 62.7  | 6.8   | 74.5  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Skip | Coord | Coord | Gap   | Coord |

**Intersection Summary**  
 Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 42 (38%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
16: Beauregard St & Highview Ln

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL   | NBT  | NBR  | SBL   | SBT   | SBR  |
|---------------------|-------|------|------|-------|-------|------|-------|------|------|-------|-------|------|
| Lane Configurations | ↔     | ↔    | ↔    | ↔     | ↔     | ↔    | ↔     | ↔    | ↔    | ↔     | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12   | 12    | 12   | 12   | 12    | 12    | 12   |
| Grade (%)           | 0%    |      |      |       | 0%    |      | 0%    |      |      |       | -1%   |      |
| Storage Length (ft) | 0     |      | 150  | 115   |       | 0    | 185   |      | 0    | 185   |       | 0    |
| Storage Lanes       | 1     |      | 1    | 1     |       | 0    | 1     |      | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50    |      |      | 50    |       |      | 50    |      |      | 50    |       |      |
| 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     | 0.99  |      |      |       | 0.98  |      | 1.00  |      |      |       | 0.99  |      |
| Frt                 | 0.925 |      |      |       | 0.859 |      | 0.998 |      |      |       | 0.966 |      |
| Flt Protected       | 0.950 |      |      | 0.950 |       |      | 0.950 |      |      | 0.950 |       |      |
| Satd. Flow (prot)   | 1770  | 1712 | 0    | 1770  | 1572  | 0    | 1770  | 3530 | 0    | 1778  | 3409  | 0    |
| Flt Permitted       | 0.705 |      |      | 0.751 |       |      | 0.066 |      |      | 0.247 |       |      |
| Satd. Flow (perm)   | 1313  | 1712 | 0    | 1399  | 1572  | 0    | 123   | 3530 | 0    | 462   | 3409  | 0    |
| Right Turn on Red   |       |      | Yes  |       |       | Yes  |       |      | Yes  |       |       | Yes  |
| Satd. Flow (RTOR)   | 5     |      |      |       | 75    |      | 2     |      |      |       | 59    |      |
| Link Speed (mph)    | 25    |      |      |       | 25    |      | 35    |      |      |       | 35    |      |
| Link Distance (ft)  | 429   |      |      |       | 351   |      | 718   |      |      |       | 796   |      |
| Travel Time (s)     | 11.7  |      |      |       | 9.6   |      | 14.0  |      |      |       | 15.5  |      |

Intersection Summary

Area Type: Other

Timings  
16: Beauregard St & Highview Ln

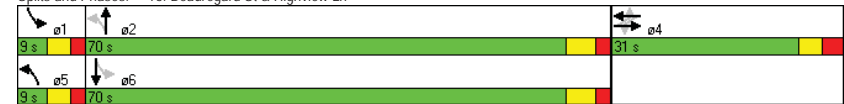
2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 130   | 5     | 65    | 5     | 25    | 960   | 10    | 1280  |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 4     |       | 4     |       | 5     |       | 2     |       |
| Permitted Phases     | 4     |       | 4     |       | 2     |       | 6     |       |
| Detector Phase       | 4     |       | 4     |       | 5     |       | 2     |       |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 31.0  | 31.0  | 31.0  | 31.0  | 9.0   | 31.0  | 9.0   | 31.0  |
| Total Split (s)      | 31.0  | 31.0  | 31.0  | 31.0  | 9.0   | 70.0  | 9.0   | 70.0  |
| Total Split (%)      | 28.2% | 28.2% | 28.2% | 28.2% | 8.2%  | 63.6% | 8.2%  | 63.6% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  | 17.1  | 17.1  | 17.1  | 17.1  | 80.9  | 79.1  | 78.8  | 74.6  |
| Actuated g/C Ratio   | 0.16  | 0.16  | 0.16  | 0.16  | 0.74  | 0.72  | 0.72  | 0.68  |
| v/c Ratio            | 0.69  | 0.04  | 0.32  | 0.26  | 0.16  | 0.41  | 0.03  | 0.76  |
| Control Delay        | 59.9  | 26.6  | 43.3  | 11.7  | 5.0   | 4.6   | 5.0   | 10.2  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.1   |
| Total Delay          | 59.9  | 26.6  | 43.3  | 11.7  | 5.0   | 4.6   | 5.0   | 10.3  |
| LOS                  | E     | C     | D     | B     | A     | A     | A     | B     |
| Approach Delay       | 57.7  |       | 26.4  |       | 4.6   |       | 10.2  |       |
| Approach LOS         | E     |       | C     |       | A     |       | B     |       |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 31 (28%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.76  
 Intersection Signal Delay: 11.4  
 Intersection LOS: B  
 Intersection Capacity Utilization 71.6%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 16: Beauregard St & Highview Ln



Phasings  
16: Beauregard St & Highview Ln

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL  | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|------|-------|
| Protected Phases        |       | 4     |       | 4     | 5     | 2     | 1    | 6     |
| Permitted Phases        | 4     |       | 4     |       | 2     |       | 6    |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 4.0   | 10.0  | 4.0  | 10.0  |
| Minimum Split (s)       | 31.0  | 31.0  | 31.0  | 31.0  | 9.0   | 31.0  | 9.0  | 31.0  |
| Total Split (s)         | 31.0  | 31.0  | 31.0  | 31.0  | 9.0   | 70.0  | 9.0  | 70.0  |
| Total Split (%)         | 28.2% | 28.2% | 28.2% | 28.2% | 8.2%  | 63.6% | 8.2% | 63.6% |
| Maximum Green (s)       | 25.0  | 25.0  | 25.0  | 25.0  | 4.0   | 64.0  | 4.0  | 64.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0  | 2.0   |
| Lead/Lag                |       |       |       |       | Lead  | Lag   | Lead | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |      |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | C-Max | None | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   |       | 7.0   |      | 7.0   |
| Flash Dont Walk (s)     | 18.0  | 18.0  | 18.0  | 18.0  |       | 18.0  |      | 18.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     |       | 0     |      | 0     |
| 90th %ile Green (s)     | 24.8  | 24.8  | 24.8  | 24.8  | 4.2   | 64.0  | 4.2  | 64.0  |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Max   | Coord | Max  | Coord |
| 70th %ile Green (s)     | 19.9  | 19.9  | 19.9  | 19.9  | 6.2   | 78.1  | 0.0  | 66.9  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Coord | Skip  | Skip | Coord |
| 50th %ile Green (s)     | 17.0  | 17.0  | 17.0  | 17.0  | 5.9   | 81.0  | 0.0  | 70.1  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Coord | Skip  | Skip | Coord |
| 30th %ile Green (s)     | 14.0  | 14.0  | 14.0  | 14.0  | 0.0   | 84.0  | 0.0  | 84.0  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Skip  | Coord | Skip | Coord |
| 10th %ile Green (s)     | 9.8   | 9.8   | 9.8   | 9.8   | 0.0   | 88.2  | 0.0  | 88.2  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Skip  | Coord | Skip | Coord |

**Intersection Summary**  
 Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 31 (28%), Referenced to phase 2-NBTL and 6-SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT  | SBR   |  |
|---------------------|-------|------|-------|-------|-------|------|-------|-------|------|-------|------|-------|--|
| Lane Configurations |       |      |       |       |       |      |       |       |      |       |      |       |  |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  |  |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12   | 12    |  |
| Grade (%)           |       | 0%   |       |       | 0%    |      |       | 0%    |      |       | 0%   |       |  |
| Storage Length (ft) | 235   |      | 0     | 0     |       | 0    | 235   |       | 0    | 150   |      | 170   |  |
| Storage Lanes       | 1     |      | 1     | 1     |       | 1    | 1     |       | 0    | 1     |      | 1     |  |
| Taper Length (ft)   | 50    |      |       | 50    |       |      | 50    |       |      | 50    |      |       |  |
| Lane Util. Factor   | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00 | 0.97  | 0.95  | 0.95 | 1.00  | 0.95 | 1.00  |  |
| Ped Bike Factor     |       |      |       |       | 1.00  |      |       |       |      |       |      | 0.98  |  |
| Frt                 |       |      | 0.850 |       | 0.972 |      |       | 0.996 |      |       |      | 0.850 |  |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      | 0.950 |       |      | 0.950 |      |       |  |
| Satd. Flow (prot)   | 1770  | 1863 | 1583  | 1770  | 1803  | 0    | 3433  | 3525  | 0    | 1770  | 3539 | 1417  |  |
| Flt Permitted       | 0.701 |      |       | 0.715 |       |      | 0.950 |       |      | 0.950 |      |       |  |
| Satd. Flow (perm)   | 1306  | 1863 | 1583  | 1332  | 1803  | 0    | 3433  | 3525  | 0    | 1770  | 3539 | 1388  |  |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |       |       | Yes  |       |      | Yes   |  |
| Satd. Flow (RTOR)   |       |      | 665   |       | 13    |      |       | 3     |      |       |      | 371   |  |
| Link Speed (mph)    |       | 35   |       |       | 15    |      |       | 35    |      |       |      | 35    |  |
| Link Distance (ft)  |       | 1573 |       |       | 252   |      |       | 414   |      |       |      | 921   |  |
| Travel Time (s)     |       | 30.6 |       |       | 11.5  |      |       | 8.1   |      |       |      | 17.9  |  |

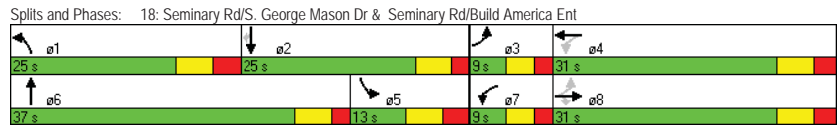
**Intersection Summary**  
 Area Type: Other

**Timings** 2035 Market with Traffic Mitigation  
 18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent PM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↘     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↘     |
| Volume (vph)         | 90    | 60    | 700   | 115   | 65    | 630   | 575   | 80    | 580   | 345   |
| Turn Type            | pm+pt | NA    | Perm  | pm+pt | NA    | Prot  | NA    | Prot  | NA    | Perm  |
| Protected Phases     | 3     | 8     |       | 7     | 4     | 1     | 6     | 5     | 2     |       |
| Permitted Phases     | 8     |       | 8     | 4     |       |       |       |       |       | 2     |
| Detector Phase       | 3     | 8     | 8     | 7     | 4     | 1     | 6     | 5     | 2     | 2     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 5.0   | 5.0   | 4.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.0   | 27.5  | 27.5  | 9.0   | 11.5  | 12.0  | 11.0  | 12.0  | 24.0  | 24.0  |
| Total Split (s)      | 9.0   | 31.0  | 31.0  | 9.0   | 31.0  | 25.0  | 37.0  | 13.0  | 25.0  | 25.0  |
| Total Split (%)      | 10.0% | 34.4% | 34.4% | 10.0% | 34.4% | 27.8% | 41.1% | 14.4% | 27.8% | 27.8% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.5   | 2.5   | 2.0   | 2.5   | 3.0   | 2.0   | 3.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | -3.0  | -3.0  | -3.0  | -2.0  | -3.0  | -2.0  | -2.0  |
| Total Lost Time (s)  | 2.5   | 4.0   | 4.0   | 2.0   | 3.5   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | Max   | None  | None  | None  |
| Act Effct Green (s)  | 23.8  | 17.4  | 17.4  | 23.6  | 17.7  | 20.8  | 35.3  | 9.3   | 20.1  | 20.1  |
| Actuated g/C Ratio   | 0.31  | 0.22  | 0.22  | 0.30  | 0.23  | 0.27  | 0.46  | 0.12  | 0.26  | 0.26  |
| v/c Ratio            | 0.22  | 0.16  | 0.86  | 0.28  | 0.20  | 0.73  | 0.39  | 0.40  | 0.68  | 0.59  |
| Control Delay        | 18.6  | 25.1  | 16.0  | 19.1  | 22.2  | 34.1  | 18.4  | 42.6  | 32.2  | 7.6   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 18.6  | 25.1  | 16.0  | 19.1  | 22.2  | 34.1  | 18.4  | 42.6  | 32.2  | 7.6   |
| LOS                  | B     | C     | B     | B     | C     | C     | B     | D     | C     | A     |
| Approach Delay       |       | 17.0  |       |       | 20.4  |       | 26.5  |       | 24.6  |       |
| Approach LOS         |       | B     |       |       | C     |       | C     |       | C     |       |

**Intersection Summary**

Cycle Length: 90  
 Actuated Cycle Length: 77.4  
 Natural Cycle: 80  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 23.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 75.7%  
 ICU Level of Service D  
 Analysis Period (min) 15



**Phasings** 2035 Market with Traffic Mitigation  
 18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent PM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 3     | 8     |       | 7     | 4     | 1     | 6     | 5     | 2     |       |
| Permitted Phases        | 8     |       | 8     | 4     |       |       |       |       |       | 2     |
| Minimum Initial (s)     | 4.0   | 5.0   | 5.0   | 4.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)       | 9.0   | 27.5  | 27.5  | 9.0   | 11.5  | 12.0  | 11.0  | 12.0  | 24.0  | 24.0  |
| Total Split (s)         | 9.0   | 31.0  | 31.0  | 9.0   | 31.0  | 25.0  | 37.0  | 13.0  | 25.0  | 25.0  |
| Total Split (%)         | 10.0% | 34.4% | 34.4% | 10.0% | 34.4% | 27.8% | 41.1% | 14.4% | 27.8% | 27.8% |
| Maximum Green (s)       | 4.0   | 24.5  | 24.5  | 4.0   | 24.5  | 18.0  | 31.0  | 6.0   | 19.0  | 19.0  |
| Yellow Time (s)         | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 2.0   | 2.5   | 2.5   | 2.0   | 2.5   | 3.0   | 2.0   | 3.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | Min   | Max   | None  | None  | None  |
| Walk Time (s)           |       | 7.0   | 7.0   |       |       |       |       |       | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       | 14.0  | 14.0  |       |       |       |       |       | 11.0  | 11.0  |
| Pedestrian Calls (#/hr) |       | 0     | 0     |       |       |       |       |       | 0     | 0     |
| 90th %ile Green (s)     | 4.0   | 24.5  | 24.5  | 4.0   | 24.5  | 18.0  | 31.0  | 6.0   | 19.0  | 19.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Hold  | Max   | MaxR  | Max   | Max   | Max   |
| 70th %ile Green (s)     | 4.0   | 24.5  | 24.5  | 4.0   | 24.5  | 18.0  | 31.0  | 6.0   | 19.0  | 19.0  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Hold  | Max   | MaxR  | Max   | Max   | Max   |
| 50th %ile Green (s)     | 4.0   | 14.7  | 14.7  | 4.0   | 14.7  | 18.0  | 31.0  | 6.0   | 19.0  | 19.0  |
| 50th %ile Term Code     | Max   | Gap   | Gap   | Max   | Hold  | Max   | MaxR  | Max   | Max   | Max   |
| 30th %ile Green (s)     | 4.0   | 8.0   | 8.0   | 4.0   | 8.0   | 18.0  | 31.0  | 6.0   | 19.0  | 19.0  |
| 30th %ile Term Code     | Max   | Gap   | Gap   | Max   | Hold  | Max   | MaxR  | Max   | Hold  | Hold  |
| 10th %ile Green (s)     | 0.0   | 6.3   | 6.3   | 0.0   | 0.0   | 14.5  | 34.5  | 0.0   | 13.0  | 13.0  |
| 10th %ile Term Code     | Skip  | Gap   | Gap   | Skip  | Skip  | Gap   | Hold  | Skip  | Gap   | Gap   |

**Intersection Summary**

Cycle Length: 90  
 Actuated Cycle Length: 77.4  
 Control Type: Semi Act-Uncoord  
 90th %ile Actuated Cycle: 90  
 70th %ile Actuated Cycle: 90  
 50th %ile Actuated Cycle: 80.2  
 30th %ile Actuated Cycle: 73.5  
 10th %ile Actuated Cycle: 53.3

Lanes and Geometrics  
20: Hampton Dr & Braddock Rd

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT   | NBR   | SBL  | SBT   | SBR  |
|---------------------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|------|
| Lane Configurations | ↔     | ↕    | ↔     | ↔     | ↕     | ↔    | ↔     | ↕     | ↔     | ↔    | ↕     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |      | 0%    |       | 0%    |      | 0%    |       | 0%    |      | 0%    |      |
| Storage Length (ft) | 170   |      | 0     | 125   |       | 0    | 0     |       | 0     | 0    |       | 0    |
| Storage Lanes       | 1     |      | 0     | 1     |       | 0    | 0     |       | 1     | 0    |       | 1    |
| Taper Length (ft)   | 50    |      |       | 50    |       |      | 50    |       |       | 50   |       |      |
| 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 |
| Ped Bike Factor     | 1.00  |      | 1.00  |       | 1.00  |      | 1.00  |       | 1.00  |      | 1.00  |      |
| Frt                 | 0.993 |      | 0.994 |       | 0.850 |      | 0.850 |       | 0.850 |      | 0.850 |      |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      |       | 0.972 |       |      | 0.960 |      |
| Satd. Flow (prot)   | 1770  | 3512 | 0     | 1770  | 3516  | 0    | 0     | 1811  | 1583  | 0    | 1788  | 1583 |
| Flt Permitted       | 0.455 |      |       | 0.438 |       |      |       | 0.755 |       |      | 0.736 |      |
| Satd. Flow (perm)   | 848   | 3512 | 0     | 816   | 3516  | 0    | 0     | 1406  | 1583  | 0    | 1371  | 1561 |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |       |       | Yes   |      |       | Yes  |
| Satd. Flow (RTOR)   | 5     |      | 4     |       | 16    |      | 16    |       | 25    |      | 25    |      |
| Link Speed (mph)    | 35    |      | 35    |       | 416   |      | 416   |       | 1381  |      | 1381  |      |
| Link Distance (ft)  | 1840  |      | 1126  |       | 11.3  |      | 11.3  |       | 37.7  |      | 37.7  |      |
| Travel Time (s)     | 35.8  |      | 21.9  |       |       |      |       |       |       |      |       |      |

Intersection Summary

Area Type: Other

Timings  
20: Hampton Dr & Braddock Rd

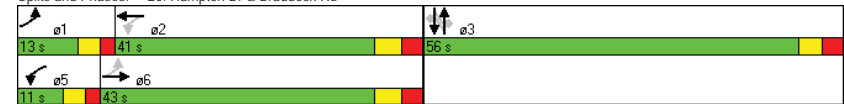
2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↔     | ↔     | ↕     | ↔     |
| Volume (vph)         | 75    | 505   | 5     | 390   | 20    | 15    | 15    | 215   | 45    | 70    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | Perm  | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     |       | 3     |       | 3     |       | 3     |
| Permitted Phases     | 6     |       | 2     |       | 3     |       | 3     | 3     |       | 3     |
| Detector Phase       | 1     | 6     | 5     | 2     | 3     | 3     | 3     | 3     | 3     | 3     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 9.0   | 16.5  | 9.0   | 16.5  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  |
| Total Split (s)      | 13.0  | 43.0  | 11.0  | 41.0  | 56.0  | 56.0  | 56.0  | 56.0  | 56.0  | 56.0  |
| Total Split (%)      | 11.8% | 39.1% | 10.0% | 37.3% | 50.9% | 50.9% | 50.9% | 50.9% | 50.9% | 50.9% |
| Yellow Time (s)      | 3.0   | 3.5   | 3.0   | 3.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| 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)  | 5.0   | 6.5   | 5.0   | 6.5   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 70.7  | 67.4  | 65.1  | 59.8  |       | 28.1  | 28.1  |       | 28.1  | 28.1  |
| Actuated g/C Ratio   | 0.64  | 0.61  | 0.59  | 0.54  |       | 0.26  | 0.26  |       | 0.26  | 0.26  |
| v/c Ratio            | 0.14  | 0.26  | 0.01  | 0.23  |       | 0.11  | 0.04  |       | 0.80  | 0.17  |
| Control Delay        | 5.8   | 8.2   | 11.2  | 19.3  |       | 28.5  | 11.0  |       | 54.2  | 6.8   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   |
| Total Delay          | 5.8   | 8.2   | 11.2  | 19.3  |       | 28.5  | 11.0  |       | 54.2  | 6.8   |
| LOS                  | A     | A     | B     | B     |       | C     | B     |       | D     | A     |
| Approach Delay       | 7.9   |       | 19.2  |       | 23.3  |       | 44.1  |       | 44.1  |       |
| Approach LOS         | A     |       | B     |       | C     |       | D     |       | D     |       |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 51 (46%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.80  
 Intersection Signal Delay: 20.3  
 Intersection LOS: C  
 Intersection Capacity Utilization 53.8%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 20: Hampton Dr & Braddock Rd



Phasings

2035 Market with Traffic Mitigation

20: Hampton Dr & Braddock Rd

PM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 1     | 6     | 5     | 2     |       | 3     |       |       | 3     |       |
| Permitted Phases        | 6     |       | 2     |       | 3     |       | 3     | 3     |       | 3     |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 9.0   | 16.5  | 9.0   | 16.5  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  |
| Total Split (s)         | 13.0  | 43.0  | 11.0  | 41.0  | 56.0  | 56.0  | 56.0  | 56.0  | 56.0  | 56.0  |
| Total Split (%)         | 11.8% | 39.1% | 10.0% | 37.3% | 50.9% | 50.9% | 50.9% | 50.9% | 50.9% | 50.9% |
| Maximum Green (s)       | 8.0   | 36.5  | 6.0   | 34.5  | 50.0  | 50.0  | 50.0  | 50.0  | 50.0  | 50.0  |
| Yellow Time (s)         | 3.0   | 3.5   | 3.0   | 3.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   |       |       |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 4.0   | 2.0   | 4.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Minimum Gap (s)         | 2.0   | 3.0   | 2.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  | None  |
| Walk Time (s)           |       |       |       |       | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |       |       |       | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  |
| Pedestrian Calls (#/hr) |       |       |       |       | 0     | 0     | 0     | 0     | 0     | 0     |
| 90th %ile Green (s)     | 9.0   | 48.3  | 5.1   | 44.4  | 39.1  | 39.1  | 39.1  | 39.1  | 39.1  | 39.1  |
| 90th %ile Term Code     | Gap   | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |
| 70th %ile Green (s)     | 7.3   | 65.2  | 0.0   | 52.9  | 32.3  | 32.3  | 32.3  | 32.3  | 32.3  | 32.3  |
| 70th %ile Term Code     | Gap   | Coord | Skip  | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |
| 50th %ile Green (s)     | 6.3   | 69.5  | 0.0   | 58.2  | 28.0  | 28.0  | 28.0  | 28.0  | 28.0  | 28.0  |
| 50th %ile Term Code     | Gap   | Coord | Skip  | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |
| 30th %ile Green (s)     | 5.5   | 73.9  | 0.0   | 63.4  | 23.6  | 23.6  | 23.6  | 23.6  | 23.6  | 23.6  |
| 30th %ile Term Code     | Gap   | Coord | Skip  | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |
| 10th %ile Green (s)     | 0.0   | 80.2  | 0.0   | 80.2  | 17.3  | 17.3  | 17.3  | 17.3  | 17.3  | 17.3  |
| 10th %ile Term Code     | Skip  | Coord | Skip  | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 51 (46%), Referenced to phase 2-WBTL and 6-EBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

2035 Market with Traffic Mitigation

23: Library Ln & Seminary Rd

PM PEAK

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT  | NBR   | SBL   | SBT  | SBR   |
|---------------------|-------|-------|------|-------|-------|------|-------|------|-------|-------|------|-------|
| Lane Configurations |       |       |      |       |       |      |       |      |       |       |      |       |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12    |
| Grade (%)           |       | 0%    |      |       | 0%    |      |       | 0%   |       |       | 0%   |       |
| Storage Length (ft) | 150   |       | 0    | 100   |       | 0    | 150   |      | 150   | 150   |      | 150   |
| Storage Lanes       | 1     |       | 0    | 1     |       | 0    | 1     |      | 1     | 1     |      | 1     |
| Taper Length (ft)   | 50    |       |      | 50    |       |      | 50    |      | 50    | 50    |      | 50    |
| Lane Util. Factor   | 1.00  | 0.91  | 0.91 | 1.00  | 0.91  | 0.91 | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  |
| Ped Bike Factor     |       | 1.00  |      | 0.97  | 1.00  |      | 0.87  |      | 0.98  | 0.99  |      | 0.86  |
| Frt                 |       | 0.998 |      |       | 0.991 |      |       |      | 0.850 |       |      | 0.850 |
| Flt Protected       | 0.950 |       |      | 0.950 |       |      | 0.950 |      |       | 0.950 |      |       |
| Satd. Flow (prot)   | 1770  | 5053  | 0    | 1770  | 5032  | 0    | 1770  | 1863 | 1583  | 1770  | 1863 | 1583  |
| Flt Permitted       | 0.226 |       |      | 0.158 |       |      |       |      |       | 0.769 |      |       |
| Satd. Flow (perm)   | 421   | 5053  | 0    | 284   | 5032  | 0    | 1622  | 1863 | 1548  | 1418  | 1863 | 1360  |
| Right Turn on Red   |       |       | Yes  |       |       | Yes  |       |      | Yes   |       |      | Yes   |
| Satd. Flow (RTOR)   |       | 3     |      |       | 10    |      |       |      | 5     |       |      | 145   |
| Link Speed (mph)    |       | 35    |      |       | 35    |      |       |      | 35    |       |      | 25    |
| Link Distance (ft)  |       | 277   |      |       | 464   |      |       |      | 777   |       |      | 520   |
| Travel Time (s)     |       | 5.4   |      |       | 9.0   |      |       |      | 15.1  |       |      | 14.2  |

Intersection Summary

Area Type: Other

**Timings**  
23: Library Ln & Seminary Rd

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔↔    | ↔     | ↔↔    | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 240   | 1395  | 35    | 890   | 45    | 5     | 5     | 90    | 15    | 270   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    | pm+ov |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4     |       | 3     | 8     | 1     |
| Permitted Phases     | 6     |       | 2     |       | 4     |       | 4     | 8     |       | 8     |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4     | 4     | 3     | 8     | 1     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 30.0  | 4.0   | 30.0  | 4.0   | 8.0   | 8.0   | 4.0   | 8.0   | 7.0   |
| Minimum Split (s)    | 12.0  | 36.5  | 9.0   | 36.5  | 9.0   | 21.0  | 21.0  | 9.0   | 21.0  | 12.0  |
| Total Split (s)      | 30.0  | 64.0  | 12.0  | 46.0  | 12.0  | 21.0  | 21.0  | 13.0  | 22.0  | 30.0  |
| Total Split (%)      | 27.3% | 58.2% | 10.9% | 41.8% | 10.9% | 19.1% | 19.1% | 11.8% | 20.0% | 27.3% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.0   | 6.0   | 5.0   | 6.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 86.8  | 78.9  | 73.7  | 66.7  | 10.3  | 8.0   | 8.0   | 11.6  | 8.4   | 19.3  |
| Actuated g/C Ratio   | 0.79  | 0.72  | 0.67  | 0.61  | 0.09  | 0.07  | 0.07  | 0.11  | 0.08  | 0.18  |
| v/c Ratio            | 0.51  | 0.42  | 0.14  | 0.33  | 0.30  | 0.04  | 0.04  | 0.55  | 0.11  | 0.75  |
| Control Delay        | 7.4   | 7.9   | 4.9   | 5.8   | 45.8  | 48.2  | 29.6  | 55.5  | 49.0  | 32.2  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 7.4   | 7.9   | 4.9   | 5.8   | 45.8  | 48.2  | 29.6  | 55.5  | 49.0  | 32.2  |
| LOS                  | A     | A     | A     | A     | D     | D     | C     | E     | D     | C     |
| Approach Delay       |       | 7.8   |       | 5.8   |       | 44.6  |       |       | 38.5  |       |
| Approach LOS         |       | A     |       | A     |       | D     |       |       | D     |       |

**Intersection Summary**

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 106 (96%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.75  
 Intersection Signal Delay: 11.6  
 Intersection LOS: B  
 Intersection Capacity Utilization 64.8%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 23: Library Ln & Seminary Rd



**Phasings**  
23: Library Ln & Seminary Rd

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 1     | 6     | 5     | 2     | 7     | 4     |       | 3     | 8     | 1     |
| Permitted Phases        | 6     |       | 2     |       | 4     |       | 4     | 8     |       | 8     |
| Minimum Initial (s)     | 7.0   | 30.0  | 4.0   | 30.0  | 4.0   | 8.0   | 8.0   | 4.0   | 8.0   | 7.0   |
| Minimum Split (s)       | 12.0  | 36.5  | 9.0   | 36.5  | 9.0   | 21.0  | 21.0  | 9.0   | 21.0  | 12.0  |
| Total Split (s)         | 30.0  | 64.0  | 12.0  | 46.0  | 12.0  | 21.0  | 21.0  | 13.0  | 22.0  | 30.0  |
| Total Split (%)         | 27.3% | 58.2% | 10.9% | 41.8% | 10.9% | 19.1% | 19.1% | 11.8% | 20.0% | 27.3% |
| Maximum Green (s)       | 25.0  | 58.0  | 7.0   | 40.0  | 7.0   | 16.0  | 16.0  | 8.0   | 17.0  | 25.0  |
| Yellow Time (s)         | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  | None  |
| Walk Time (s)           |       | 5.0   |       | 5.0   |       | 5.0   |       | 5.0   |       | 5.0   |
| Flash Dont Walk (s)     |       | 11.0  |       | 11.0  |       | 11.0  |       | 11.0  |       | 11.0  |
| Pedestrian Calls (#/hr) |       | 0     |       | 0     |       | 0     |       | 0     |       | 0     |
| 90th %ile Green (s)     | 19.6  | 66.0  | 7.0   | 53.4  | 7.0   | 8.0   | 8.0   | 8.0   | 9.0   | 19.6  |
| 90th %ile Term Code     | Gap   | Coord | Gap   | Coord | Max   | Min   | Min   | Max   | Hold  | Gap   |
| 70th %ile Green (s)     | 14.1  | 66.5  | 6.5   | 58.9  | 7.0   | 8.0   | 8.0   | 8.0   | 9.0   | 14.1  |
| 70th %ile Term Code     | Gap   | Coord | Gap   | Coord | Max   | Min   | Min   | Max   | Hold  | Gap   |
| 50th %ile Green (s)     | 16.9  | 80.2  | 5.8   | 69.1  | 8.0   | 0.0   | 0.0   | 8.0   | 0.0   | 16.9  |
| 50th %ile Term Code     | Gap   | Coord | Gap   | Coord | Hold  | Skip  | Skip  | Max   | Skip  | Gap   |
| 30th %ile Green (s)     | 13.1  | 91.0  | 0.0   | 72.9  | 8.0   | 0.0   | 0.0   | 8.0   | 0.0   | 13.1  |
| 30th %ile Term Code     | Gap   | Coord | Skip  | Coord | Hold  | Skip  | Skip  | Max   | Skip  | Gap   |
| 10th %ile Green (s)     | 7.0   | 91.0  | 0.0   | 79.0  | 0.0   | 0.0   | 0.0   | 8.0   | 8.0   | 7.0   |
| 10th %ile Term Code     | Min   | Coord | Skip  | Coord | Skip  | Skip  | Skip  | Hold  | Hold  | Min   |

**Intersection Summary**

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 106 (96%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
 33: Seminary Rd (S)/Seminary Rd (N) & Seminary Rd 2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL  | EBT  | EBR  | WBL  | WBT   | WBR   | NBL  | NBT  | NBR   | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|-------|-------|------|------|-------|------|------|------|
| Lane Configurations |      | ↑    |      |      | ↑↑    | ↑↑    |      |      | ↑↑    |      |      |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12   | 12   | 12    | 12    | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           |      | 0%   |      |      | 0%    |       |      | 0%   |       |      | 0%   |      |
| Storage Length (ft) | 0    |      | 0    | 0    |       | 0     | 0    |      | 0     | 0    |      | 0    |
| Storage Lanes       | 0    |      | 0    | 0    |       | 1     | 0    |      | 2     | 0    |      | 0    |
| Taper Length (ft)   | 50   |      |      | 50   |       |       | 50   |      |       | 50   |      |      |
| Lane Util. Factor   | 1.00 | 1.00 | 1.00 | 1.00 | 0.91  | 0.91  | 1.00 | 1.00 | 0.88  | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      |      |      | 0.986 | 0.850 |      |      | 0.850 |      |      |      |
| Frt                 |      |      |      |      |       |       |      |      |       |      |      |      |
| Flt Protected       |      |      |      |      |       |       |      |      |       |      |      |      |
| Satd. Flow (prot)   | 0    | 1863 | 0    | 0    | 3343  | 1441  | 0    | 0    | 2787  | 0    | 0    | 0    |
| Flt Permitted       |      |      |      |      |       |       |      |      |       |      |      |      |
| Satd. Flow (perm)   | 0    | 1863 | 0    | 0    | 3343  | 1441  | 0    | 0    | 2787  | 0    | 0    | 0    |
| Link Speed (mph)    |      | 35   |      |      | 35    |       |      |      | 35    |      |      | 30   |
| Link Distance (ft)  |      | 269  |      |      | 195   |       |      |      | 278   |      |      | 199  |
| Travel Time (s)     |      | 5.2  |      |      | 3.8   |       |      |      | 5.4   |      |      | 4.5  |

**Intersection Summary**  
 Area Type: Other

Lanes and Geometrics  
 41: Van Dorn St & Kenmore Ave S 2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | WBL   | WBR   | NBT   | NBR  | SBL  | SBT   |
|---------------------|-------|-------|-------|------|------|-------|
| Lane Configurations | ↑     | ↑     | ↑↑    |      |      | ↑↑    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900  | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12    | 12   | 12   | 12    |
| Grade (%)           | 0%    |       | 0%    |      |      | 0%    |
| Storage Length (ft) | 0     | 50    |       | 0    | 0    |       |
| Storage Lanes       | 1     | 1     |       | 0    | 0    |       |
| Taper Length (ft)   | 50    |       |       |      | 50   |       |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95  | 0.95 | 0.95 | 0.95  |
| Ped Bike Factor     |       | 0.99  | 0.99  |      |      |       |
| Frt                 |       | 0.850 | 0.980 |      |      |       |
| Flt Protected       | 0.950 |       |       |      |      | 0.999 |
| Satd. Flow (prot)   | 1770  | 1583  | 3448  | 0    | 0    | 3536  |
| Flt Permitted       | 0.950 |       |       |      |      | 0.885 |
| Satd. Flow (perm)   | 1770  | 1561  | 3448  | 0    | 0    | 3132  |
| Right Turn on Red   |       | Yes   |       | Yes  |      |       |
| Satd. Flow (RTOR)   |       | 15    | 19    |      |      |       |
| Link Speed (mph)    | 30    |       | 35    |      |      | 35    |
| Link Distance (ft)  | 908   |       | 2895  |      |      | 1898  |
| Travel Time (s)     | 20.6  |       | 56.4  |      |      | 37.0  |

**Intersection Summary**  
 Area Type: Other



**Timings**  
**41: Van Dorn St & Kenmore Ave S**

2035 Market with Traffic Mitigation  
 PM PEAK

| Lane Group           | WBL   | WBR   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↕     | ↔     | ↕     |
| Volume (vph)         | 340   | 60    | 650   | 40    | 1350  |
| Turn Type            | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 2     |       | 1     |       | 1     |
| Permitted Phases     |       | 2     |       | 1     |       |
| Detector Phase       | 2     | 2     | 1     | 1     | 1     |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)    | 27.5  | 27.5  | 29.0  | 29.0  | 29.0  |
| Total Split (s)      | 60.0  | 60.0  | 120.0 | 120.0 | 120.0 |
| Total Split (%)      | 33.3% | 33.3% | 66.7% | 66.7% | 66.7% |
| Yellow Time (s)      | 3.5   | 3.5   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.5   | 5.5   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             | Lag   | Lag   | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?   |       |       |       |       |       |
| Recall Mode          | None  | None  | C-Max | C-Max | C-Max |
| Act Effct Green (s)  | 43.6  | 43.6  | 124.9 |       | 124.9 |
| Actuated g/C Ratio   | 0.24  | 0.24  | 0.69  |       | 0.69  |
| v/c Ratio            | 0.85  | 0.17  | 0.34  |       | 0.69  |
| Control Delay        | 83.4  | 39.8  | 7.7   |       | 19.4  |
| Queue Delay          | 0.0   | 0.0   | 0.0   |       | 0.0   |
| Total Delay          | 83.4  | 39.8  | 7.7   |       | 19.4  |
| LOS                  | F     | D     | A     |       | B     |
| Approach Delay       | 76.8  |       | 7.7   |       | 19.4  |
| Approach LOS         | E     |       | A     |       | B     |

**Intersection Summary**

Cycle Length: 180  
 Actuated Cycle Length: 180  
 Offset: 47 (26%), Referenced to phase 1:NBSB, Start of Green  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 25.0  
 Intersection LOS: C  
 Intersection Capacity Utilization 93.1%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 41: Van Dorn St & Kenmore Ave S



**Phasings**  
**41: Van Dorn St & Kenmore Ave S**

2035 Market with Traffic Mitigation  
 PM PEAK

| Lane Group              | WBL   | WBR   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|
| Protected Phases        | 2     |       | 1     |       | 1     |
| Permitted Phases        |       | 2     |       | 1     |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 27.5  | 27.5  | 29.0  | 29.0  | 29.0  |
| Total Split (s)         | 60.0  | 60.0  | 120.0 | 120.0 | 120.0 |
| Total Split (%)         | 33.3% | 33.3% | 66.7% | 66.7% | 66.7% |
| Maximum Green (s)       | 54.5  | 54.5  | 114.0 | 114.0 | 114.0 |
| Yellow Time (s)         | 3.5   | 3.5   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lag   | Lag   | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?      |       |       |       |       |       |
| Vehicle Extension (s)   | 4.0   | 4.0   | 0.2   | 0.2   | 0.2   |
| Minimum Gap (s)         | 4.0   | 4.0   | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | C-Max | C-Max | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     | 15.0  | 15.0  | 16.0  | 16.0  | 16.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     |
| 90th %ile Green (s)     | 54.5  | 54.5  | 114.0 | 114.0 | 114.0 |
| 90th %ile Term Code     | Max   | Max   | Coord | Coord | Coord |
| 70th %ile Green (s)     | 48.0  | 48.0  | 120.5 | 120.5 | 120.5 |
| 70th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord |
| 50th %ile Green (s)     | 43.7  | 43.7  | 124.8 | 124.8 | 124.8 |
| 50th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord |
| 30th %ile Green (s)     | 39.2  | 39.2  | 129.3 | 129.3 | 129.3 |
| 30th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord |
| 10th %ile Green (s)     | 32.6  | 32.6  | 135.9 | 135.9 | 135.9 |
| 10th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord |

**Intersection Summary**

Cycle Length: 180  
 Actuated Cycle Length: 180  
 Offset: 47 (26%), Referenced to phase 1:NBSB, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics 2035 Market with Traffic Mitigation  
 42: Van Dorn St & Sanger Ave/Richenbacher Ave PM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL  | WBT   | WBR  | NBL   | NBT  | NBR   | SBL  | SBT  | SBR  |
|---------------------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|
| Lane Configurations |       |      |       |      |       |      |       |      |       |      |      |      |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12   | 12    | 12   | 12    | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           | 0%    |      | 0%    |      | 0%    |      | 0%    |      | 0%    |      | 0%   |      |
| Storage Length (ft) | 150   |      | 0     | 0    |       | 150  | 390   |      | 0     | 140  |      | 0    |
| Storage Lanes       | 0     |      | 1     | 1    |       | 1    | 1     |      | 0     | 1    |      | 0    |
| Taper Length (ft)   | 50    |      |       | 50   |       |      | 50    |      |       | 50   |      |      |
| Lane Util. Factor   | 1.00  | 0.95 | 0.95  | 1.00 | 1.00  | 1.00 | 1.00  | 0.95 | 0.95  | 1.00 | 0.95 | 0.95 |
| Ped Bike Factor     | 0.97  |      | 0.95  |      | 0.99  |      | 1.00  |      | 1.00  |      | 1.00 |      |
| Frt                 | 0.916 |      | 0.850 |      | 0.955 |      | 0.993 |      | 0.989 |      |      |      |
| Flt Protected       | 0.990 |      | 0.950 |      | 0.950 |      | 0.950 |      | 0.950 |      |      |      |
| Satd. Flow (prot)   | 0     | 1560 | 1770  | 1770 | 1755  | 0    | 1770  | 3508 | 0     | 1770 | 3497 | 0    |
| Flt Permitted       | 0.990 |      | 0.950 |      | 0.056 |      | 0.424 |      |       |      |      |      |
| Satd. Flow (perm)   | 0     | 1560 | 1429  | 1770 | 1755  | 0    | 104   | 3508 | 0     | 790  | 3497 | 0    |
| Right Turn on Red   |       |      | No    |      | Yes   |      | Yes   |      | Yes   |      | Yes  |      |
| Satd. Flow (RTOR)   |       |      |       |      | 10    |      | 4     |      | 5     |      |      |      |
| Link Speed (mph)    | 25    |      | 25    |      | 35    |      | 35    |      | 35    |      |      |      |
| Link Distance (ft)  | 517   |      | 1172  |      | 801   |      | 2895  |      |       |      |      |      |
| Travel Time (s)     | 14.1  |      | 32.0  |      | 15.6  |      | 56.4  |      |       |      |      |      |

Intersection Summary

Area Type: Other

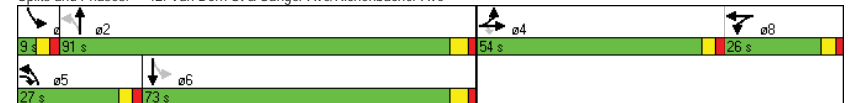
Timings 2035 Market with Traffic Mitigation  
 42: Van Dorn St & Sanger Ave/Richenbacher Ave PM PEAK

| Lane Group           | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |
| Volume (vph)         | 105   | 680   | 20    | 70    | 275   | 535   | 40    | 1260  |
| Turn Type            | NA    | pm+ov | Split | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 4     | 5     | 8     | 8     | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 2     |       | 6     |       |       |       |
| Detector Phase       | 4     | 5     | 8     | 8     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 26.0  | 9.0   | 26.0  | 26.0  | 9.0   | 27.0  | 9.0   | 27.0  |
| Total Split (s)      | 54.0  | 27.0  | 26.0  | 26.0  | 27.0  | 91.0  | 9.0   | 73.0  |
| Total Split (%)      | 30.0% | 15.0% | 14.4% | 14.4% | 15.0% | 50.6% | 5.0%  | 40.6% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             | Lead  |       | Lead  |       | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  | 49.0  | 76.0  | 16.0  | 16.0  | 100.0 | 90.6  | 73.6  | 67.0  |
| Actuated g/C Ratio   | 0.27  | 0.42  | 0.09  | 0.09  | 0.56  | 0.50  | 0.41  | 0.37  |
| v/c Ratio            | 1.14  | 0.75  | 0.14  | 0.65  | 0.96  | 0.34  | 0.12  | 1.12  |
| Control Delay        | 144.4 | 37.1  | 75.2  | 89.0  | 106.9 | 26.6  | 17.4  | 106.4 |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 144.4 | 37.1  | 75.2  | 89.0  | 106.9 | 26.6  | 17.4  | 106.4 |
| LOS                  | F     | D     | E     | F     | F     | C     | B     | F     |
| Approach Delay       | 92.1  |       |       | 86.7  |       | 53.1  |       | 103.8 |
| Approach LOS         | F     |       |       | F     |       | D     |       | F     |

Intersection Summary

Cycle Length: 180  
 Actuated Cycle Length: 180  
 Offset: 104 (58%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.14  
 Intersection Signal Delay: 86.9 Intersection LOS: F  
 Intersection Capacity Utilization 98.7% ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 42: Van Dorn St & Sanger Ave/Richenbacher Ave



Phasings

42: Van Dorn St & Sanger Ave/Richenbacher Ave

2035 Market with Traffic Mitigation

PM PEAK

|                         | →     | ↘     | ↙     | ←     | ↖     | ↑     | ↗    | ↓     |
|-------------------------|-------|-------|-------|-------|-------|-------|------|-------|
| Lane Group              | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL  | SBT   |
| Protected Phases        | 4     | 5     | 8     | 8     | 5     | 2     | 1    | 6     |
| Permitted Phases        | 4     |       |       |       |       |       |      |       |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 10.0  | 4.0  | 10.0  |
| Minimum Split (s)       | 26.0  | 9.0   | 26.0  | 26.0  | 9.0   | 27.0  | 9.0  | 27.0  |
| Total Split (s)         | 54.0  | 27.0  | 26.0  | 26.0  | 27.0  | 91.0  | 9.0  | 73.0  |
| Total Split (%)         | 30.0% | 15.0% | 14.4% | 14.4% | 15.0% | 50.6% | 5.0% | 40.6% |
| Maximum Green (s)       | 49.0  | 22.0  | 21.0  | 21.0  | 22.0  | 85.0  | 4.0  | 67.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0  | 2.0   |
| Lead/Lag                | Lead  |       |       |       | Lead  |       | Lag  |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |      |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 0.2   | 3.0  | 0.2   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 0.2   | 3.0  | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | C-Max | None | C-Max |
| Walk Time (s)           | 7.0   |       | 7.0   | 7.0   |       | 7.0   |      | 7.0   |
| Flash Dont Walk (s)     | 14.0  |       | 14.0  | 14.0  |       | 14.0  |      | 14.0  |
| Pedestrian Calls (#/hr) | 10    |       | 10    | 10    |       | 10    |      | 10    |
| 90th %ile Green (s)     | 49.0  | 22.0  | 21.0  | 21.0  | 22.0  | 85.0  | 4.0  | 67.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Coord | Max  | Coord |
| 70th %ile Green (s)     | 49.0  | 22.0  | 21.0  | 21.0  | 22.0  | 85.0  | 4.0  | 67.0  |
| 70th %ile Term Code     | Max   | Max   | Ped   | Ped   | Max   | Coord | Max  | Coord |
| 50th %ile Green (s)     | 49.0  | 27.6  | 15.4  | 15.4  | 27.6  | 87.1  | 7.5  | 67.0  |
| 50th %ile Term Code     | Max   | Max   | Gap   | Gap   | Max   | Coord | Gap  | Coord |
| 30th %ile Green (s)     | 49.0  | 30.0  | 13.0  | 13.0  | 30.0  | 90.2  | 6.8  | 67.0  |
| 30th %ile Term Code     | Max   | Max   | Gap   | Gap   | Max   | Coord | Gap  | Coord |
| 10th %ile Green (s)     | 49.0  | 33.6  | 9.4   | 9.4   | 33.6  | 105.6 | 0.0  | 67.0  |
| 10th %ile Term Code     | Max   | Max   | Gap   | Gap   | Max   | Coord | Skip | Coord |

Intersection Summary

Cycle Length: 180  
 Actuated Cycle Length: 180  
 Offset: 104 (58%), Referenced to phase 2:NBL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

43: Van Dorn St/ Van Dorn St & Braddock Rd

2035 Market with Traffic Mitigation

PM PEAK

|                     | ↖     | →    | ↘    | ↙     | ←     | ↖    | ↑     | ↗    | ↘     | ↓     | ↙    |      |
|---------------------|-------|------|------|-------|-------|------|-------|------|-------|-------|------|------|
| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL   | NBT  | NBR   | SBL   | SBT  | SBR  |
| Lane Configurations | ↖     | ↖↗   |      | ↖     | ↖↗    |      | ↖     | ↖↗   |       | ↖     | ↖↗   |      |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12   |
| Grade (%)           | 0%    |      |      |       | 0%    |      | 0%    |      | 0%    |       |      |      |
| Storage Length (ft) | 40    |      | 0    | 140   |       | 0    | 150   |      | 0     | 100   |      | 0    |
| Storage Lanes       | 1     |      | 0    | 1     |       | 0    | 1     |      | 0     | 1     |      | 0    |
| Taper Length (ft)   | 50    |      |      | 50    |       |      | 50    |      |       | 50    |      |      |
| Lane Util. Factor   | 1.00  | 0.95 | 0.95 | 1.00  | 0.95  | 0.95 | 1.00  | 0.95 | 0.95  | 1.00  | 0.95 | 0.95 |
| Ped Bike Factor     | 0.99  |      |      |       | 1.00  |      | 0.99  |      | 0.99  |       | 1.00 |      |
| Frt                 | 0.905 |      |      |       | 0.972 |      | 0.916 |      | 0.999 |       |      |      |
| Flt Protected       | 0.950 |      |      | 0.950 |       |      | 0.950 |      |       | 0.950 |      |      |
| Satd. Flow (prot)   | 1770  | 3161 | 0    | 1770  | 3426  | 0    | 1770  | 3212 | 0     | 1770  | 3535 | 0    |
| Flt Permitted       | 0.677 |      |      | 0.136 |       |      | 0.107 |      |       | 0.586 |      |      |
| Satd. Flow (perm)   | 1261  | 3161 | 0    | 253   | 3426  | 0    | 199   | 3212 | 0     | 1092  | 3535 | 0    |
| Right Turn on Red   |       |      | Yes  |       |       |      | Yes   |      | Yes   |       |      |      |
| Satd. Flow (RTOR)   | 270   |      |      |       | 22    |      | 151   |      |       |       |      |      |
| Link Speed (mph)    | 35    |      |      |       | 35    |      | 35    |      |       |       | 35   |      |
| Link Distance (ft)  | 1126  |      |      |       | 1277  |      | 652   |      |       |       | 1512 |      |
| Travel Time (s)     | 21.9  |      |      |       | 24.9  |      | 12.7  |      |       |       | 29.5 |      |

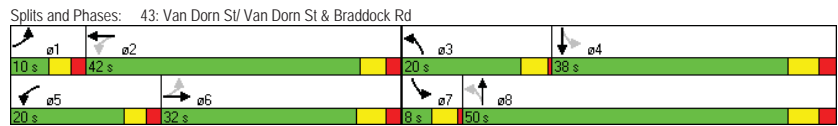
Intersection Summary

Area Type: Other

Timings 2035 Market with Traffic Mitigation  
 43: Van Dorn St/ Van Dorn St & Braddock Rd PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↖↗    | ↖     | ↖↗    | ↖     | ↖↗    | ↖     | ↖↗    |
| Volume (vph)         | 20    | 260   | 300   | 90    | 315   | 110   | 15    | 875   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 1     | 6     | 5     | 2     | 3     | 8     | 7     | 4     |
| Permitted Phases     | 6     |       | 2     |       | 8     |       | 4     |       |
| Detector Phase       | 1     | 6     | 5     | 2     | 3     | 8     | 7     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 4.0   | 7.0   | 4.0   | 7.0   |
| Minimum Split (s)    | 10.0  | 29.0  | 10.0  | 28.5  | 8.0   | 34.5  | 8.0   | 34.5  |
| Total Split (s)      | 10.0  | 32.0  | 20.0  | 42.0  | 20.0  | 50.0  | 8.0   | 38.0  |
| Total Split (%)      | 9.1%  | 29.1% | 18.2% | 38.2% | 18.2% | 45.5% | 7.3%  | 34.5% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 3.5   | 3.5   | 4.0   | 3.5   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 0.5   | 2.5   | 0.5   | 2.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -5.0  | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.0   | 6.0   | 5.0   | 5.5   | 4.0   | 1.5   | 4.0   | 6.5   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | Min   | None  | C-Max | None  | Min   | None  | Min   |
| Act Effct Green (s)  | 32.4  | 26.4  | 47.4  | 42.9  | 53.6  | 52.9  | 37.6  | 31.1  |
| Actuated g/C Ratio   | 0.29  | 0.24  | 0.43  | 0.39  | 0.49  | 0.48  | 0.34  | 0.28  |
| v/c Ratio            | 0.06  | 0.80  | 1.02  | 0.09  | 1.04  | 0.17  | 0.04  | 0.95  |
| Control Delay        | 11.0  | 24.8  | 85.6  | 19.0  | 87.3  | 3.5   | 15.9  | 57.5  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 11.0  | 24.8  | 85.6  | 19.0  | 87.3  | 3.5   | 15.9  | 57.5  |
| LOS                  | B     | C     | F     | B     | F     | A     | B     | E     |
| Approach Delay       |       | 24.5  |       | 67.6  |       | 50.2  |       | 56.8  |
| Approach LOS         |       | C     |       | E     |       | D     |       | E     |

**Intersection Summary**  
 Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 46 (42%), Referenced to phase 2:WBTL, Start of Green  
 Natural Cycle: 95  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.04  
 Intersection Signal Delay: 48.0  
 Intersection LOS: D  
 Intersection Capacity Utilization 98.6%  
 ICU Level of Service F  
 Analysis Period (min) 15



Phasings 2035 Market with Traffic Mitigation  
 43: Van Dorn St/ Van Dorn St & Braddock Rd PM PEAK

| Lane Group              | EBL  | EBT   | WBL   | WBT   | NBL   | NBT   | SBL  | SBT   |
|-------------------------|------|-------|-------|-------|-------|-------|------|-------|
| Protected Phases        | 1    | 6     | 5     | 2     | 3     | 8     | 7    | 4     |
| Permitted Phases        | 6    |       | 2     |       | 8     |       | 4    |       |
| Minimum Initial (s)     | 5.0  | 10.0  | 5.0   | 10.0  | 4.0   | 7.0   | 4.0  | 7.0   |
| Minimum Split (s)       | 10.0 | 29.0  | 10.0  | 28.5  | 8.0   | 34.5  | 8.0  | 34.5  |
| Total Split (s)         | 10.0 | 32.0  | 20.0  | 42.0  | 20.0  | 50.0  | 8.0  | 38.0  |
| Total Split (%)         | 9.1% | 29.1% | 18.2% | 38.2% | 18.2% | 45.5% | 7.3% | 34.5% |
| Maximum Green (s)       | 5.0  | 26.0  | 15.0  | 36.5  | 16.0  | 43.5  | 4.0  | 31.5  |
| Yellow Time (s)         | 3.0  | 4.0   | 3.0   | 3.5   | 3.5   | 4.0   | 3.5  | 4.0   |
| All-Red Time (s)        | 2.0  | 2.0   | 2.0   | 2.0   | 0.5   | 2.5   | 0.5  | 2.5   |
| Lead/Lag                | Lead | Lag   | Lead  | Lag   | Lead  | Lag   | Lead | Lag   |
| Lead-Lag Optimize?      |      |       |       |       |       |       |      |       |
| Vehicle Extension (s)   | 3.0  | 0.2   | 3.0   | 0.2   | 3.0   | 2.0   | 3.0  | 2.0   |
| Minimum Gap (s)         | 0.2  | 0.2   | 0.2   | 0.2   | 3.0   | 0.2   | 3.0  | 0.2   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None | Min   | None  | C-Max | None  | Min   | None | Min   |
| Walk Time (s)           |      | 7.0   |       | 7.0   |       | 7.0   |      | 7.0   |
| Flash Dont Walk (s)     |      | 16.0  |       | 16.0  |       | 21.0  |      | 21.0  |
| Pedestrian Calls (#/hr) |      | 0     |       | 0     |       | 0     |      | 0     |
| 90th %ile Green (s)     | 5.0  | 26.0  | 15.0  | 36.5  | 16.0  | 43.5  | 4.0  | 31.5  |
| 90th %ile Term Code     | Max  | Coord | Max   | Coord | Max   | Hold  | Max  | Max   |
| 70th %ile Green (s)     | 5.0  | 26.0  | 15.0  | 36.5  | 16.0  | 43.5  | 4.0  | 31.5  |
| 70th %ile Term Code     | Max  | Coord | Max   | Coord | Max   | Hold  | Max  | Max   |
| 50th %ile Green (s)     | 0.0  | 26.0  | 15.0  | 46.5  | 16.0  | 51.5  | 0.0  | 31.5  |
| 50th %ile Term Code     | Skip | Coord | Max   | Coord | Max   | Hold  | Skip | Max   |
| 30th %ile Green (s)     | 0.0  | 26.0  | 15.0  | 46.5  | 16.0  | 51.5  | 0.0  | 31.5  |
| 30th %ile Term Code     | Skip | Coord | Max   | Coord | Max   | Hold  | Skip | Max   |
| 10th %ile Green (s)     | 0.0  | 28.2  | 15.0  | 48.7  | 16.0  | 49.3  | 0.0  | 29.3  |
| 10th %ile Term Code     | Skip | Coord | Max   | Coord | Max   | Hold  | Skip | Gap   |

**Intersection Summary**  
 Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 46 (42%), Referenced to phase 2:WBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
46: Beauregard St & Old Sanger Ave

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT   | WBR   | NBL  | NBT   | NBR  | SBL  | SBT   | SBR  |
|---------------------|------|-------|-------|------|-------|-------|------|-------|------|------|-------|------|
| Lane Configurations |      |       | ↗     |      |       | ↗     |      | ↕     |      |      | ↕     |      |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12   | 12   | 12    | 12   |
| Grade (%)           |      | 0%    |       |      | 0%    |       |      | 0%    |      |      | 0%    |      |
| Storage Length (ft) | 150  |       | 0     | 150  |       | 0     | 175  |       | 0    | 125  |       | 0    |
| Storage Lanes       | 0    |       | 1     | 0    |       | 1     | 0    |       | 0    | 0    |       | 0    |
| Taper Length (ft)   | 50   |       |       | 50   |       |       | 50   |       |      | 50   |       |      |
| Lane Util. Factor   | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 0.95 | 0.95  | 0.95 | 0.95 | 0.95  | 0.95 |
| Ped Bike Factor     |      |       |       |      |       |       |      | 1.00  |      |      |       | 1.00 |
| Frt                 |      |       | 0.865 |      |       | 0.865 |      | 0.982 |      |      | 0.998 |      |
| Flt Protected       |      | 0.980 |       |      | 0.954 |       |      | 0.999 |      |      | 0.993 |      |
| Satd. Flow (prot)   | 0    | 0     | 1611  | 0    | 0     | 1611  | 0    | 3456  | 0    | 0    | 3502  | 0    |
| Flt Permitted       |      | 0.894 |       |      | 0.715 |       |      | 0.910 |      |      | 0.604 |      |
| Satd. Flow (perm)   | 0    | 0     | 1611  | 0    | 0     | 1611  | 0    | 3148  | 0    | 0    | 2130  | 0    |
| Right Turn on Red   |      |       | No    |      |       | No    |      |       | No   |      |       | No   |
| Satd. Flow (RTOR)   |      |       |       |      |       |       |      |       |      |      |       |      |
| Link Speed (mph)    |      | 25    |       |      | 25    |       |      | 35    |      |      | 35    |      |
| Link Distance (ft)  |      | 869   |       |      | 972   |       |      | 958   |      |      | 397   |      |
| Travel Time (s)     |      | 23.7  |       |      | 26.5  |       |      | 18.7  |      |      | 7.7   |      |

Intersection Summary

Area Type: Other

Timings  
46: Beauregard St & Old Sanger Ave

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT    | EBR   | WBL   | WBT    | WBR   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|--------|-------|-------|--------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |        | ↗     |       |        | ↗     |       | ↕     |       | ↕     |
| Volume (vph)         | 10    | 15     | 205   | 245   | 10     | 20    | 20    | 825   | 140   | 865   |
| Turn Type            | Perm  | NA     | Prot  | Perm  | NA     | Prot  | Perm  | NA    | Perm  | NA    |
| Protected Phases     |       | 4      | 4     |       | 8      | 8     |       | 2     |       | 6     |
| Permitted Phases     | 4     |        |       | 8     |        |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 4      | 4     | 8     | 8      | 8     | 2     | 2     | 6     | 6     |
| Switch Phase         |       |        |       |       |        |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0    | 4.0   | 4.0   | 4.0    | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 26.0  | 26.0   | 26.0  | 26.0  | 26.0   | 26.0  | 28.0  | 28.0  | 28.0  | 28.0  |
| Total Split (s)      | 29.0  | 29.0   | 29.0  | 29.0  | 29.0   | 29.0  | 81.0  | 81.0  | 81.0  | 81.0  |
| Total Split (%)      | 26.4% | 26.4%  | 26.4% | 26.4% | 26.4%  | 26.4% | 73.6% | 73.6% | 73.6% | 73.6% |
| Yellow Time (s)      | 3.0   | 3.0    | 3.0   | 3.0   | 3.0    | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.0    | 2.0   | 2.0   | 2.0    | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| 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)  | 5.0   | 5.0    | 5.0   | 5.0   | 5.0    | 5.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Lead/Lag             |       |        |       |       |        |       |       |       |       |       |
| Lead-Lag Optimize?   |       |        |       |       |        |       | C-Max | C-Max | C-Max | C-Max |
| Recall Mode          | None  | None   | None  | None  | None   | None  | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s)  | 0.0   | 24.0   |       | 0.0   | 24.0   |       | 74.0  |       | 74.0  |       |
| Actuated g/C Ratio   | 0.00  | 0.22   |       | 0.00  | 0.22   |       | 0.67  |       | 0.67  |       |
| v/c Ratio            |       | no cap | 0.63  |       | no cap | 0.06  | 0.49  |       | 0.76  |       |
| Control Delay        |       |        | 48.0  |       |        | 49.7  | 3.8   |       | 9.7   |       |
| Queue Delay          |       |        | 0.0   |       |        | 0.0   | 0.0   |       | 0.0   |       |
| Total Delay          |       | Error  | 48.0  |       | Error  | 49.7  | 3.8   |       | 9.7   |       |
| LOS                  |       | F      | D     |       | F      | D     | A     |       | A     |       |
| Approach Delay       |       | Err    |       |       | Err    |       | 3.8   |       | 9.7   |       |
| Approach LOS         |       | F      |       |       | F      |       | A     |       | A     |       |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 23 (21%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: Err  
 Intersection Signal Delay: Err  
 Intersection Capacity Utilization Err%  
 Analysis Period (min) 15  
 Intersection LOS: F  
 ICU Level of Service H

Splits and Phases: 46: Beauregard St & Old Sanger Ave



Phasings  
46: Beauregard St & Old Sanger Ave

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 4     | 4     |       | 8     | 8     |       | 2     | 6     | 6     |
| Permitted Phases        | 4     |       |       | 8     |       |       | 2     |       | 6     |       |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 26.0  | 26.0  | 26.0  | 26.0  | 26.0  | 26.0  | 28.0  | 28.0  | 28.0  | 28.0  |
| Total Split (s)         | 29.0  | 29.0  | 29.0  | 29.0  | 29.0  | 29.0  | 81.0  | 81.0  | 81.0  | 81.0  |
| Total Split (%)         | 26.4% | 26.4% | 26.4% | 26.4% | 26.4% | 26.4% | 73.6% | 73.6% | 73.6% | 73.6% |
| Maximum Green (s)       | 24.0  | 24.0  | 24.0  | 24.0  | 24.0  | 24.0  | 74.0  | 74.0  | 74.0  | 74.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                |       |       |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     | 14.0  | 14.0  | 14.0  | 14.0  | 14.0  | 14.0  | 14.0  | 14.0  | 14.0  | 14.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     |
| 90th %ile Green (s)     | 24.0  | 24.0  | 24.0  | 24.0  | 24.0  | 24.0  | 74.0  | 74.0  | 74.0  | 74.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Coord | Coord | Coord | Coord |
| 70th %ile Green (s)     | 24.0  | 24.0  | 24.0  | 24.0  | 24.0  | 24.0  | 74.0  | 74.0  | 74.0  | 74.0  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Coord | Coord | Coord | Coord |
| 50th %ile Green (s)     | 24.0  | 24.0  | 24.0  | 24.0  | 24.0  | 24.0  | 74.0  | 74.0  | 74.0  | 74.0  |
| 50th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Coord | Coord | Coord | Coord |
| 30th %ile Green (s)     | 24.0  | 24.0  | 24.0  | 24.0  | 24.0  | 24.0  | 74.0  | 74.0  | 74.0  | 74.0  |
| 30th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Coord | Coord | Coord | Coord |
| 10th %ile Green (s)     | 24.0  | 24.0  | 24.0  | 24.0  | 24.0  | 24.0  | 74.0  | 74.0  | 74.0  | 74.0  |
| 10th %ile Term Code     | Hold  | Hold  | Hold  | Max   | Max   | Max   | Coord | Coord | Coord | Coord |

**Intersection Summary**

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 23 (21%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Control Type: Actuated-Coordinated

Lanes and Geometrics  
47: Van Dorn St/Van Dorn St & Taney Ave

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | WBL   | WBR   | NBT   | NBR  | SBL   | SBT  |
|---------------------|-------|-------|-------|------|-------|------|
| Lane Configurations |       |       |       |      |       |      |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |       | 0%    |      |       | 0%   |
| Storage Length (ft) | 0     | 85    |       | 0    | 180   |      |
| Storage Lanes       | 1     | 1     |       | 0    | 1     |      |
| Taper Length (ft)   | 50    |       |       |      | 50    |      |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95  | 0.95 | 1.00  | 0.95 |
| Ped Bike Factor     | 0.99  | 0.99  |       |      |       |      |
| Frt                 |       | 0.850 | 0.976 |      |       |      |
| Flt Protected       | 0.950 |       |       |      | 0.950 |      |
| Satd. Flow (prot)   | 1770  | 1583  | 3435  | 0    | 1770  | 3539 |
| Flt Permitted       | 0.950 |       |       |      | 0.950 |      |
| Satd. Flow (perm)   | 1770  | 1560  | 3435  | 0    | 1770  | 3539 |
| Right Turn on Red   |       | Yes   |       | Yes  |       |      |
| Satd. Flow (RTOR)   |       | 45    | 26    |      |       |      |
| Link Speed (mph)    | 25    |       | 35    |      |       | 35   |
| Link Distance (ft)  | 1013  |       | 910   |      |       | 801  |
| Travel Time (s)     | 27.6  |       | 17.7  |      |       | 15.6 |

**Intersection Summary**

Area Type: Other

Timings

47: Van Dorn St/Van Dorn St & Taney Ave

2035 Market with Traffic Mitigation

PM PEAK

| Lane Group           | WBL   | WBR   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↑↓    | ↔     | ↔     |
| Volume (vph)         | 140   | 60    | 775   | 90    | 1870  |
| Turn Type            | NA    | Perm  | NA    | Prot  | NA    |
| Protected Phases     | 2     |       | 1     | 3     | 1 3   |
| Permitted Phases     |       | 2     |       |       |       |
| Detector Phase       | 2     | 2     | 1     | 3     | 1 3   |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 10.0  | 4.0   |       |
| Minimum Split (s)    | 25.0  | 25.0  | 16.0  | 9.0   |       |
| Total Split (s)      | 33.0  | 33.0  | 123.0 | 24.0  | 147.0 |
| Total Split (%)      | 18.3% | 18.3% | 68.3% | 13.3% | 81.7% |
| Yellow Time (s)      | 3.0   | 3.0   | 4.0   | 3.0   |       |
| All-Red Time (s)     | 3.0   | 3.0   | 2.0   | 2.0   |       |
| Lost Time Adjust (s) | -3.0  | -3.0  | -3.0  | -2.0  | -3.0  |
| Total Lost Time (s)  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag             | Lag   | Lag   | Lead  |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |
| Recall Mode          | None  | None  | C-Max | None  |       |
| Act Effct Green (s)  | 22.7  | 22.7  | 120.0 | 28.3  | 151.3 |
| Actuated g/C Ratio   | 0.13  | 0.13  | 0.67  | 0.16  | 0.84  |
| v/c Ratio            | 0.68  | 0.28  | 0.43  | 0.35  | 0.68  |
| Control Delay        | 89.7  | 28.8  | 14.3  | 97.9  | 1.2   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 1.1   |
| Total Delay          | 89.7  | 28.8  | 14.3  | 97.9  | 2.3   |
| LOS                  | F     | C     | B     | F     | A     |
| Approach Delay       | 71.4  |       | 14.3  |       | 6.7   |
| Approach LOS         | E     |       | B     |       | A     |

Intersection Summary

Cycle Length: 180  
 Actuated Cycle Length: 180  
 Offset: 62 (34%), Referenced to phase 1:NBSB, Start of Yellow  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.68  
 Intersection Signal Delay: 13.2  
 Intersection LOS: B  
 Intersection Capacity Utilization 66.4%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 47: Van Dorn St/Van Dorn St & Taney Ave



Phasings

47: Van Dorn St/Van Dorn St & Taney Ave

2035 Market with Traffic Mitigation

PM PEAK

| Lane Group              | WBL   | WBR   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|
| Protected Phases        | 2     |       | 1     | 3     | 1 3   |
| Permitted Phases        |       | 2     |       |       |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 10.0  | 4.0   |       |
| Minimum Split (s)       | 25.0  | 25.0  | 16.0  | 9.0   |       |
| Total Split (s)         | 33.0  | 33.0  | 123.0 | 24.0  | 147.0 |
| Total Split (%)         | 18.3% | 18.3% | 68.3% | 13.3% | 81.7% |
| Maximum Green (s)       | 27.0  | 27.0  | 117.0 | 19.0  |       |
| Yellow Time (s)         | 3.0   | 3.0   | 4.0   | 3.0   |       |
| All-Red Time (s)        | 3.0   | 3.0   | 2.0   | 2.0   |       |
| Lead/Lag                | Lag   | Lag   | Lead  |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 2.0   | 0.2   | 2.0   |       |
| Minimum Gap (s)         | 2.0   | 2.0   | 0.2   | 2.0   |       |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Recall Mode             | None  | None  | C-Max | None  |       |
| Walk Time (s)           | 4.0   | 4.0   |       |       |       |
| Flash Dont Walk (s)     | 15.0  | 15.0  |       |       |       |
| Pedestrian Calls (#/hr) | 0     | 0     |       |       |       |
| 90th %ile Green (s)     | 26.7  | 26.7  | 117.0 | 19.3  |       |
| 90th %ile Term Code     | Gap   | Gap   | Coord | Max   |       |
| 70th %ile Green (s)     | 22.6  | 22.6  | 117.0 | 23.4  |       |
| 70th %ile Term Code     | Gap   | Gap   | Coord | Max   |       |
| 50th %ile Green (s)     | 19.7  | 19.7  | 117.0 | 26.3  |       |
| 50th %ile Term Code     | Gap   | Gap   | Coord | Max   |       |
| 30th %ile Green (s)     | 16.8  | 16.8  | 117.0 | 29.2  |       |
| 30th %ile Term Code     | Gap   | Gap   | Coord | Max   |       |
| 10th %ile Green (s)     | 12.6  | 12.6  | 117.0 | 33.4  |       |
| 10th %ile Term Code     | Gap   | Gap   | Coord | Max   |       |

Intersection Summary

Cycle Length: 180  
 Actuated Cycle Length: 180  
 Offset: 62 (34%), Referenced to phase 1:NBSB, Start of Yellow  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
51: Beauregard St & New Sanger Ave

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL  | WBT  | WBR   | NBL   | NBT   | NBR  | SBL  | SBT   | SBR  |
|---------------------|-------|------|-------|------|------|-------|-------|-------|------|------|-------|------|
| Lane Configurations | ↔     | ↔    | ↔     | ↔    | ↔    | ↔     | ↔     | ↔     | ↔    | ↔    | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12   | 12   | 12    | 12    | 12    | 12   | 12   | 12    | 12   |
| Grade (%)           |       | 0%   |       |      | 0%   |       |       | 0%    |      |      | 0%    |      |
| Storage Length (ft) | 150   |      | 200   | 0    |      | 200   | 150   |       | 0    | 175  |       | 0    |
| Storage Lanes       | 1     |      | 1     | 0    |      | 1     | 1     |       | 0    | 0    |       | 0    |
| Taper Length (ft)   | 50    |      |       | 50   |      |       | 50    |       |      | 50   |       |      |
| 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     |       |      | 0.850 |      |      | 0.850 |       | 0.978 |      |      | 0.994 |      |
| Frt Protected       | 0.950 |      |       |      |      |       | 0.950 |       |      |      |       |      |
| Satd. Flow (prot)   | 1770  | 1863 | 1583  | 0    | 1863 | 1583  | 1770  | 3461  | 0    | 0    | 3518  | 0    |
| Frt Permitted       | 0.444 |      |       |      |      |       | 0.259 |       |      |      |       |      |
| Satd. Flow (perm)   | 827   | 1863 | 1583  | 0    | 1863 | 1583  | 482   | 3461  | 0    | 0    | 3518  | 0    |
| Right Turn on Red   |       |      | Yes   |      |      | Yes   |       |       | Yes  |      |       | Yes  |
| Satd. Flow (RTOR)   |       |      | 215   |      |      | 70    |       | 32    |      |      | 6     |      |
| Link Speed (mph)    |       | 25   |       |      | 25   |       |       | 35    |      |      | 35    |      |
| Link Distance (ft)  |       | 643  |       |      | 940  |       |       | 397   |      |      | 531   |      |
| Travel Time (s)     |       | 17.5 |       |      | 25.6 |       |       | 7.7   |      |      | 10.3  |      |

Intersection Summary

Area Type: Other

Timings  
51: Beauregard St & New Sanger Ave

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBT   | WBR   | NBL   | NBT   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 45    | 20    | 200   | 35    | 65    | 110   | 635   | 815   |
| Turn Type            | pm+pt | NA    | Perm  | NA    | Perm  | pm+pt | NA    | NA    |
| Protected Phases     | 7     | 4     |       | 8     |       | 5     | 2     | 6     |
| Permitted Phases     | 4     |       | 4     |       | 8     | 2     |       |       |
| Detector Phase       | 7     | 4     | 4     | 8     | 8     | 5     | 2     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 9.0   | 27.0  | 27.0  | 27.0  | 27.0  | 9.0   | 27.0  | 27.0  |
| Total Split (s)      | 11.0  | 42.0  | 42.0  | 31.0  | 31.0  | 11.0  | 68.0  | 57.0  |
| Total Split (%)      | 10.0% | 38.2% | 38.2% | 28.2% | 28.2% | 10.0% | 61.8% | 51.8% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -5.0  | -5.0  | -5.0  |
| Total Lost Time (s)  | 5.0   | 6.0   | 6.0   | 6.0   | 6.0   | 0.0   | 1.0   | 1.0   |
| Lead/Lag             | Lead  |       |       | Lag   | Lag   | Lead  |       | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | C-Max |
| Act Effct Green (s)  | 17.5  | 16.5  | 16.5  | 7.7   | 7.7   | 87.5  | 86.5  | 74.2  |
| Actuated g/C Ratio   | 0.16  | 0.15  | 0.15  | 0.07  | 0.07  | 0.80  | 0.79  | 0.67  |
| v/c Ratio            | 0.26  | 0.08  | 0.51  | 0.29  | 0.40  | 0.22  | 0.29  | 0.38  |
| Control Delay        | 41.1  | 38.1  | 9.9   | 62.4  | 27.6  | 2.8   | 2.2   | 3.0   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.1   | 0.1   |
| Total Delay          | 41.1  | 38.1  | 9.9   | 62.4  | 27.6  | 2.8   | 2.3   | 3.1   |
| LOS                  | D     | D     | A     | E     | C     | A     | A     | A     |
| Approach Delay       |       | 17.3  |       | 39.9  |       |       | 2.3   | 3.1   |
| Approach LOS         |       | B     |       | D     |       |       | A     | A     |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 35 (32%), Referenced to phase 2:NBL and 6:SBT, Start of Green  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.51  
 Intersection Signal Delay: 6.4  
 Intersection LOS: A  
 Intersection Capacity Utilization 50.6%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 51: Beauregard St & New Sanger Ave





Phasings  
51: Beauregard St & New Sanger Ave

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBT   | WBR   | NBL   | NBT   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 7     | 4     |       | 8     |       | 5     | 2     | 6     |
| Permitted Phases        | 4     |       | 4     |       | 8     |       | 2     |       |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 9.0   | 27.0  | 27.0  | 27.0  | 27.0  | 9.0   | 27.0  | 27.0  |
| Total Split (s)         | 11.0  | 42.0  | 42.0  | 31.0  | 31.0  | 11.0  | 68.0  | 57.0  |
| Total Split (%)         | 10.0% | 38.2% | 38.2% | 28.2% | 28.2% | 10.0% | 61.8% | 51.8% |
| Maximum Green (s)       | 6.0   | 36.0  | 36.0  | 25.0  | 25.0  | 6.0   | 62.0  | 51.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead  |       |       | Lag   | Lag   | Lead  |       | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 4.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | C-Max | C-Max |       |
| Walk Time (s)           |       | 7.0   | 7.0   |       | 7.0   |       | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       | 14.0  | 14.0  |       | 14.0  |       | 14.0  | 14.0  |
| Pedestrian Calls (#/hr) |       | 0     | 0     |       | 0     |       | 0     | 0     |
| 90th %ile Green (s)     | 6.0   | 21.3  | 21.3  | 10.3  | 10.3  | 8.9   | 76.7  | 62.8  |
| 90th %ile Term Code     | Max   | Hold  | Hold  | Gap   | Gap   | Gap   | Coord | Coord |
| 70th %ile Green (s)     | 6.0   | 19.7  | 19.7  | 8.7   | 8.7   | 7.8   | 78.3  | 65.5  |
| 70th %ile Term Code     | Max   | Hold  | Hold  | Gap   | Gap   | Gap   | Coord | Coord |
| 50th %ile Green (s)     | 6.0   | 18.6  | 18.6  | 7.6   | 7.6   | 7.2   | 79.4  | 67.2  |
| 50th %ile Term Code     | Max   | Hold  | Hold  | Gap   | Gap   | Gap   | Coord | Coord |
| 30th %ile Green (s)     | 6.0   | 17.5  | 17.5  | 6.5   | 6.5   | 6.6   | 80.5  | 68.9  |
| 30th %ile Term Code     | Max   | Hold  | Hold  | Gap   | Gap   | Gap   | Coord | Coord |
| 10th %ile Green (s)     | 0.0   | 5.5   | 5.5   | 5.5   | 5.5   | 5.7   | 92.5  | 81.8  |
| 10th %ile Term Code     | Skip  | Gap   | Gap   | Hold  | Hold  | Gap   | Coord | Coord |

| Intersection Summary   |  |
|------------------------|--|
| Cycle Length:          | 110  |
| Actuated Cycle Length: | 110  |
| Offset:                | 35 (32%), Referenced to phase 2-NBTL and 6-SBT, Start of Green |
| Control Type:          | Actuated-Coordinated   |

Lanes and Geometrics  
52: Beauregard St & Rayburn Ave

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT   | WBR   | NBL   | NBT   | NBR  | SBL   | SBT  | SBR   |
|---------------------|------|-------|-------|------|-------|-------|-------|-------|------|-------|------|-------|
| Lane Configurations |      | ↕     | ↕     |      | ↕     | ↕     | ↕     | ↕↔    |      | ↕     | ↕    | ↕     |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12    | 12   | 12    | 12   | 12    |
| Grade (%)           |      | 0%    |       |      | 0%    |       |       | 0%    |      |       | 0%   |       |
| Storage Length (ft) | 0    |       | 100   | 0    |       | 150   | 190   |       | 0    | 175   |      | 0     |
| Storage Lanes       | 0    |       | 1     | 0    |       | 1     | 1     |       | 0    | 1     |      | 0     |
| Taper Length (ft)   | 50   |       |       | 50   |       |       | 50    |       |      | 50    |      |       |
| 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     |      |       |       |      | 0.98  | 0.97  |       | 1.00  |      |       |      | 0.99  |
| Frt                 |      |       | 0.850 |      |       | 0.850 |       | 0.995 |      |       |      | 0.961 |
| Flt Protected       |      | 0.954 |       |      | 0.958 |       | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (prot)   | 0    | 1777  | 1583  | 0    | 1785  | 1583  | 1770  | 3511  | 0    | 1770  | 3380 | 0     |
| Flt Permitted       |      | 0.669 |       |      | 0.424 |       | 0.102 |       |      | 0.303 |      |       |
| Satd. Flow (perm)   | 0    | 1246  | 1583  | 0    | 775   | 1529  | 190   | 3511  | 0    | 564   | 3380 | 0     |
| Right Turn on Red   |      |       | Yes   |      |       | Yes   |       |       | Yes  |       |      | Yes   |
| Satd. Flow (RTOR)   |      |       | 49    |      |       | 32    |       | 4     |      |       | 66   |       |
| Link Speed (mph)    |      | 25    |       |      | 25    |       |       | 35    |      |       | 35   |       |
| Link Distance (ft)  |      | 354   |       |      | 559   |       |       | 713   |      |       | 718  |       |
| Travel Time (s)     |      | 9.7   |       |      | 15.2  |       |       | 13.9  |      |       | 14.0 |       |

| Intersection Summary |       |
|----------------------|-------|
| Area Type:           | Other |

Timings  
52: Beauregard St & Rayburn Ave

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       | ↔     | ↔     |       | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 230   | 10    | 50    | 75    | 10    | 30    | 40    | 740   | 20    | 980   |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | Perm  | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     |       | 4     |       |       | 4     |       | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 4     | 4     |       | 4     | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 9.0   | 22.0  | 9.0   | 22.0  |
| Total Split (s)      | 39.0  | 39.0  | 39.0  | 39.0  | 39.0  | 39.0  | 9.0   | 62.0  | 9.0   | 62.0  |
| Total Split (%)      | 35.5% | 35.5% | 35.5% | 35.5% | 35.5% | 35.5% | 8.2%  | 56.4% | 8.2%  | 56.4% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   |
| All-Red Time (s)     | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max | None  |
| Act Effct Green (s)  | 27.3  | 27.3  |       | 27.3  | 27.3  |       | 70.2  | 67.4  | 69.1  | 65.1  |
| Actuated g/C Ratio   | 0.25  | 0.25  |       | 0.25  | 0.25  |       | 0.64  | 0.61  | 0.63  | 0.59  |
| v/c Ratio            | 0.83  | 0.13  |       | 0.48  | 0.08  |       | 0.22  | 0.38  | 0.05  | 0.71  |
| Control Delay        | 61.1  | 10.0  |       | 42.3  | 9.8   |       | 9.9   | 10.3  | 8.6   | 12.0  |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 61.1  | 10.0  |       | 42.3  | 9.8   |       | 9.9   | 10.3  | 8.6   | 12.1  |
| LOS                  | E     | A     |       | D     | A     |       | A     | B     | A     | B     |
| Approach Delay       |       | 52.3  |       |       | 33.9  |       |       | 10.3  |       | 12.0  |
| Approach LOS         |       | D     |       |       | C     |       |       | B     |       | B     |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 34 (31%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.83  
 Intersection Signal Delay: 17.0  
 Intersection LOS: B  
 Intersection Capacity Utilization 70.4%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 52: Beauregard St & Rayburn Ave



Phasings  
52: Beauregard St & Rayburn Ave

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | SBL  | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|
| Protected Phases        |       | 4     |       |       | 4     |       | 5    | 2     | 1    | 6     |
| Permitted Phases        | 4     |       | 4     | 4     |       | 4     |      |       | 6    |       |
| Minimum Initial (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 4.0  | 10.0  | 4.0  | 10.0  |
| Minimum Split (s)       | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 9.0  | 22.0  | 9.0  | 22.0  |
| Total Split (s)         | 39.0  | 39.0  | 39.0  | 39.0  | 39.0  | 39.0  | 9.0  | 62.0  | 9.0  | 62.0  |
| Total Split (%)         | 35.5% | 35.5% | 35.5% | 35.5% | 35.5% | 35.5% | 8.2% | 56.4% | 8.2% | 56.4% |
| Maximum Green (s)       | 33.5  | 33.5  | 33.5  | 33.5  | 33.5  | 33.5  | 4.0  | 56.0  | 4.0  | 56.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)        | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.0  | 2.0   | 2.0  | 2.0   |
| Lead/Lag                |       |       |       |       |       |       | Lead | Lag   | Lead | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |      |       |      |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 0.2   | 3.0  | 0.2   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 0.2   | 3.0  | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None | C-Max | None | C-Max |
| Walk Time (s)           | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |      | 4.0   |      | 4.0   |
| Flash Dont Walk (s)     | 18.0  | 18.0  | 18.0  | 18.0  | 18.0  | 18.0  |      | 12.0  |      | 12.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     | 0     |      | 0     |      | 0     |
| 90th %ile Green (s)     | 33.5  | 33.5  | 33.5  | 33.5  | 33.5  | 33.5  | 4.0  | 56.0  | 4.0  | 56.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Max  | Coord | Max  | Coord |
| 70th %ile Green (s)     | 32.6  | 32.6  | 32.6  | 32.6  | 32.6  | 32.6  | 4.9  | 56.0  | 4.9  | 56.0  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Max  | Coord | Max  | Coord |
| 50th %ile Green (s)     | 28.8  | 28.8  | 28.8  | 28.8  | 28.8  | 28.8  | 6.4  | 69.7  | 0.0  | 58.3  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Gap  | Coord | Skip | Coord |
| 30th %ile Green (s)     | 23.9  | 23.9  | 23.9  | 23.9  | 23.9  | 23.9  | 0.0  | 74.6  | 0.0  | 74.6  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Skip | Coord | Skip | Coord |
| 10th %ile Green (s)     | 17.7  | 17.7  | 17.7  | 17.7  | 17.7  | 17.7  | 0.0  | 80.8  | 0.0  | 80.8  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Skip | Coord | Skip | Coord |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 34 (31%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
53: Beauregard St & Reading Ave

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT  | NBR  | SBL   | SBT  | SBR  |
|---------------------|-------|------|-------|-------|-------|------|-------|------|------|-------|------|------|
| Lane Configurations | ↔     | ↔    | ↔     | ↔     | ↔     | ↔    | ↔     | ↔    | ↔    | ↔     | ↔    | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12   | 12   | 12    | 12   | 12   |
| Grade (%)           | 0%    |      | 0%    |       | 0%    |      | 0%    |      | 0%   |       | 0%   |      |
| Storage Length (ft) | 0     |      | 100   | 0     |       | 150  | 165   |      | 0    | 175   |      | 0    |
| Storage Lanes       | 1     |      | 0     | 1     |       | 0    | 1     |      | 0    | 1     |      | 0    |
| Taper Length (ft)   | 50    |      |       | 50    |       |      | 50    |      |      | 50    |      |      |
| 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     | 0.98  |      | 0.98  |       | 1.00  |      | 1.00  |      | 1.00 |       | 1.00 |      |
| Frt                 | 0.856 |      | 0.857 |       | 0.993 |      | 0.994 |      |      |       |      |      |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      | 0.950 |      |      | 0.950 |      |      |
| Satd. Flow (prot)   | 1770  | 1558 | 0     | 1770  | 1564  | 0    | 1770  | 3507 | 0    | 1770  | 3507 | 0    |
| Flt Permitted       | 0.338 |      |       | 0.604 |       |      | 0.207 |      |      | 0.419 |      |      |
| Satd. Flow (perm)   | 630   | 1558 | 0     | 1125  | 1564  | 0    | 386   | 3507 | 0    | 780   | 3507 | 0    |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |       |      | Yes  |       |      | Yes  |
| Satd. Flow (RTOR)   | 129   |      |       |       | 210   |      | 6     |      | 5    |       |      |      |
| Link Speed (mph)    | 25    |      |       |       | 25    |      | 35    |      | 35   |       |      |      |
| Link Distance (ft)  | 602   |      |       |       | 584   |      | 927   |      | 713  |       |      |      |
| Travel Time (s)     | 16.4  |      |       |       | 15.9  |      | 18.1  |      | 13.9 |       |      |      |

Intersection Summary

Area Type: Other

Timings  
53: Beauregard St & Reading Ave

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 75    | 5     | 25    | 10    | 105   | 535   | 85    | 980   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 4     |       | 4     |       | 5     |       | 6     |       |
| Permitted Phases     | 4     |       | 4     |       | 2     |       | 6     |       |
| Detector Phase       | 4     |       | 4     |       | 5     |       | 2     |       |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 8.0   | 8.0   | 8.0   | 8.0   | 6.0   | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)    | 31.0  | 31.0  | 31.0  | 31.0  | 11.0  | 24.0  | 11.0  | 24.0  |
| Total Split (s)      | 35.0  | 35.0  | 35.0  | 35.0  | 16.0  | 64.0  | 11.0  | 59.0  |
| Total Split (%)      | 31.8% | 31.8% | 31.8% | 31.8% | 14.5% | 58.2% | 10.0% | 53.6% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  | 15.8  | 15.8  | 15.8  | 15.8  | 79.6  | 72.3  | 77.8  | 69.7  |
| Actuated g/C Ratio   | 0.14  | 0.14  | 0.14  | 0.14  | 0.72  | 0.66  | 0.71  | 0.63  |
| v/c Ratio            | 0.90  | 0.40  | 0.17  | 0.55  | 0.30  | 0.26  | 0.15  | 0.49  |
| Control Delay        | 114.5 | 10.9  | 40.4  | 11.6  | 5.0   | 3.2   | 3.7   | 6.7   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 114.5 | 10.9  | 40.4  | 11.6  | 5.0   | 3.2   | 3.7   | 6.7   |
| LOS                  | F     | B     | D     | B     | A     | A     | A     | A     |
| Approach Delay       | 50.0  |       | 14.7  |       | 3.5   |       | 6.5   |       |
| Approach LOS         | D     |       | B     |       | A     |       | A     |       |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 43 (39%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.90  
 Intersection Signal Delay: 10.4  
 Intersection LOS: B  
 Intersection Capacity Utilization 74.9%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 53: Beauregard St & Reading Ave



Phasings  
53: Beauregard St & Reading Ave

2035 Market with Traffic Mitigation  
PM PEAK

|                         | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 4     |       | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases        | 4     |       | 4     |       | 2     |       | 6     |       |
| Minimum Initial (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 6.0   | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)       | 31.0  | 31.0  | 31.0  | 31.0  | 11.0  | 24.0  | 11.0  | 24.0  |
| Total Split (s)         | 35.0  | 35.0  | 35.0  | 35.0  | 16.0  | 64.0  | 11.0  | 59.0  |
| Total Split (%)         | 31.8% | 31.8% | 31.8% | 31.8% | 14.5% | 58.2% | 10.0% | 53.6% |
| Maximum Green (s)       | 29.0  | 29.0  | 29.0  | 29.0  | 11.0  | 58.0  | 6.0   | 53.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   |       | 7.0   |       | 7.0   |
| Flash Dont Walk (s)     | 18.0  | 18.0  | 18.0  | 18.0  |       | 8.0   |       | 8.0   |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     |       | 0     |       | 0     |
| 90th %ile Green (s)     | 24.8  | 24.8  | 24.8  | 24.8  | 9.8   | 59.2  | 9.0   | 58.4  |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 18.8  | 18.8  | 18.8  | 18.8  | 8.1   | 66.6  | 7.6   | 66.1  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 15.7  | 15.7  | 15.7  | 15.7  | 7.3   | 70.4  | 6.9   | 70.0  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 11.6  | 11.6  | 11.6  | 11.6  | 6.5   | 75.1  | 6.3   | 74.9  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 6.0   | 90.0  | 0.0   | 79.0  |
| 10th %ile Term Code     | Min   | Min   | Min   | Min   | Min   | Coord | Skip  | Coord |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 43 (39%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
54: Beauregard St & N Morgan St

2035 Market with Traffic Mitigation  
PM PEAK

|                     | EBL   | EBT   | EBR  | WBL  | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|---------------------|-------|-------|------|------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations |       |       |      |      |       |      |       |       |      |       |       |      |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12   | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           |       | 0%    |      |      | 0%    |      |       | 0%    |      |       | 0%    |      |
| Storage Length (ft) | 0     |       | 175  | 0    |       | 0    | 115   |       | 0    | 115   |       | 0    |
| Storage Lanes       | 1     |       | 1    | 0    |       | 0    | 1     |       | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50    |       |      | 50   |       |      | 50    |       |      | 50    |       |      |
| 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     |       | 0.96  |      |      | 0.99  |      |       | 1.00  |      |       | 0.99  |      |
| Frt                 |       | 0.850 |      |      | 0.942 |      |       | 0.996 |      |       | 0.969 |      |
| Flt Protected       | 0.950 |       |      |      | 0.972 |      | 0.950 |       |      | 0.950 |       |      |
| Satd. Flow (prot)   | 1770  | 1528  | 0    | 0    | 1692  | 0    | 1770  | 3520  | 0    | 1770  | 3394  | 0    |
| Flt Permitted       | 0.750 |       |      |      | 0.814 |      | 0.176 |       |      | 0.267 |       |      |
| Satd. Flow (perm)   | 1397  | 1528  | 0    | 0    | 1417  | 0    | 328   | 3520  | 0    | 497   | 3394  | 0    |
| Right Turn on Red   |       |       | Yes  |      |       | Yes  |       |       | Yes  |       |       | Yes  |
| Satd. Flow (RTOR)   |       | 169   |      |      | 31    |      |       | 3     |      |       | 54    |      |
| Link Speed (mph)    |       | 25    |      |      | 25    |      |       | 35    |      |       | 35    |      |
| Link Distance (ft)  |       | 775   |      |      | 737   |      |       | 1035  |      |       | 958   |      |
| Travel Time (s)     |       | 21.1  |      |      | 20.1  |      |       | 20.2  |      |       | 18.7  |      |

Intersection Summary

Area Type: Other

**Timings**  
54: Beauregard St & N Morgan St

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 75    | 0     | 40    | 0     | 10    | 855   | 100   | 960   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 4     | 4     | 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)  | 8.0   | 8.0   | 8.0   | 8.0   | 4.0   | 15.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 27.0  | 27.0  | 27.0  | 27.0  | 9.0   | 21.0  | 9.0   | 21.0  |
| Total Split (s)      | 29.0  | 29.0  | 29.0  | 29.0  | 9.0   | 66.0  | 15.0  | 72.0  |
| Total Split (%)      | 26.4% | 26.4% | 26.4% | 26.4% | 8.2%  | 60.0% | 13.6% | 65.5% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | Max   | C-Max | None  | C-Max |
| Act Effct Green (s)  | 12.0  | 12.0  |       | 12.0  | 79.9  | 74.9  | 84.1  | 77.0  |
| Actuated g/C Ratio   | 0.11  | 0.11  |       | 0.11  | 0.73  | 0.68  | 0.76  | 0.70  |
| v/c Ratio            | 0.53  | 0.05  |       | 0.41  | 0.04  | 0.39  | 0.24  | 0.55  |
| Control Delay        | 58.2  | 0.3   |       | 34.9  | 1.9   | 2.9   | 4.8   | 9.4   |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 58.2  | 0.3   |       | 34.9  | 1.9   | 2.9   | 4.8   | 9.4   |
| LOS                  | E     | A     |       | C     | A     | A     | A     | A     |
| Approach Delay       |       | 48.6  |       | 34.9  |       | 2.9   |       | 9.0   |
| Approach LOS         |       | D     |       | C     |       | A     |       | A     |

**Intersection Summary**  
 Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 32 (29%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.55  
 Intersection Signal Delay: 9.0  
 Intersection LOS: A  
 Intersection Capacity Utilization 64.1%  
 ICU Level of Service C  
 Analysis Period (min) 15



**Phasings**  
54: Beauregard St & N Morgan St

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL  | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|------|-------|-------|-------|
| Protected Phases        |       | 4     |       | 4     | 5    | 2     | 1     | 6     |
| Permitted Phases        | 4     |       | 4     |       | 2    |       | 6     |       |
| Minimum Initial (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 4.0  | 15.0  | 4.0   | 10.0  |
| Minimum Split (s)       | 27.0  | 27.0  | 27.0  | 27.0  | 9.0  | 21.0  | 9.0   | 21.0  |
| Total Split (s)         | 29.0  | 29.0  | 29.0  | 29.0  | 9.0  | 66.0  | 15.0  | 72.0  |
| Total Split (%)         | 26.4% | 26.4% | 26.4% | 26.4% | 8.2% | 60.0% | 13.6% | 65.5% |
| Maximum Green (s)       | 23.0  | 23.0  | 23.0  | 23.0  | 4.0  | 60.0  | 10.0  | 66.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 2.0  | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       | Lead | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |      |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0  | 4.0   | 2.0   | 4.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 0.2  | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | Max  | C-Max | None  | C-Max |
| Walk Time (s)           | 4.0   | 4.0   | 4.0   | 4.0   |      | 7.0   |       | 7.0   |
| Flash Dont Walk (s)     | 17.0  | 17.0  | 17.0  | 17.0  |      | 8.0   |       | 8.0   |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     |      | 0     |       | 0     |
| 90th %ile Green (s)     | 16.9  | 16.9  | 16.9  | 16.9  | 4.0  | 68.4  | 7.7   | 72.1  |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | MaxR | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 13.8  | 13.8  | 13.8  | 13.8  | 4.0  | 72.6  | 6.6   | 75.2  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | MaxR | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 11.7  | 11.7  | 11.7  | 11.7  | 4.0  | 75.4  | 5.9   | 77.3  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | MaxR | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 9.6   | 9.6   | 9.6   | 9.6   | 4.0  | 78.0  | 5.4   | 79.4  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | MaxR | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 4.0  | 80.2  | 4.8   | 81.0  |
| 10th %ile Term Code     | Min   | Min   | Min   | Min   | MaxR | Coord | Gap   | Coord |

**Intersection Summary**  
 Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 32 (29%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
55: Beauregard St & N Armistead St

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL  | WBT   | WBR   | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |       |
|---------------------|-------|------|------|------|-------|-------|-------|-------|------|-------|-------|------|-------|
| Lane Configurations |       | ↔    | ↔    |      | ↔     | ↔     | ↔     | ↔     |      | ↔     | ↔     |      |       |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |       |
| Lane Width (ft)     | 12    | 12   | 12   | 12   | 12    | 12    | 12    | 12    | 12   | 12    | 12    | 12   |       |
| Grade (%)           | 0%    |      |      |      | 0%    |       | 0%    |       |      |       | 0%    |      |       |
| Storage Length (ft) | 0     |      | 50   | 0    |       | 50    | 90    |       | 0    | 80    |       | 0    |       |
| Storage Lanes       | 0     |      | 1    | 0    |       | 1     |       |       | 0    | 1     |       | 0    |       |
| Taper Length (ft)   | 50    |      |      | 50   |       |       | 50    |       |      | 50    |       |      |       |
| 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     |       |      |      |      |       | 0.98  | 1.00  |       |      |       |       | 1.00 |       |
| Frt                 | 0.850 |      |      |      |       |       | 0.850 | 0.991 |      |       |       |      | 0.993 |
| Flt Protected       | 0.950 |      |      |      | 0.950 | 0.950 |       |       |      | 0.950 |       |      |       |
| Satd. Flow (prot)   | 0     | 1770 | 1583 | 0    | 1770  | 1583  | 1770  | 3499  | 0    | 1770  | 3510  | 0    |       |
| Flt Permitted       | 0.711 |      |      |      | 0.747 | 0.335 |       |       |      |       | 0.302 |      |       |
| Satd. Flow (perm)   | 0     | 1324 | 1583 | 0    | 1391  | 1556  | 624   | 3499  | 0    | 563   | 3510  | 0    |       |
| Right Turn on Red   |       |      | Yes  |      |       |       | Yes   |       |      |       |       | Yes  |       |
| Satd. Flow (RTOR)   | 38    |      |      |      |       |       | 194   |       | 7    |       | 6     |      |       |
| Link Speed (mph)    | 25    |      |      |      | 25    |       |       |       | 35   |       |       | 35   |       |
| Link Distance (ft)  | 620   |      |      |      | 778   |       |       |       | 1020 |       |       | 1035 |       |
| Travel Time (s)     | 16.9  |      |      |      | 21.2  |       |       |       | 19.9 |       |       | 20.2 |       |

Intersection Summary

Area Type: Other

Timings  
55: Beauregard St & N Armistead St

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       | ↔     | ↔     |       | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 15    | 0     | 35    | 65    | 0     | 180   | 15    | 690   | 230   | 750   |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | Perm  | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 4     |       |       |       | 4     |       | 5     |       | 2     |       |
| Permitted Phases     | 4     |       | 4     | 4     |       | 4     | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 5.0   | 12.0  | 5.0   | 12.0  |
| Minimum Split (s)    | 36.5  | 36.5  | 36.5  | 36.5  | 36.5  | 36.5  | 10.0  | 22.0  | 10.0  | 22.0  |
| Total Split (s)      | 39.0  | 39.0  | 39.0  | 39.0  | 39.0  | 39.0  | 10.0  | 45.0  | 26.0  | 61.0  |
| Total Split (%)      | 35.5% | 35.5% | 35.5% | 35.5% | 35.5% | 35.5% | 9.1%  | 40.9% | 23.6% | 55.5% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  | 11.3  | 11.3  |       | 11.3  | 11.3  | 76.6  | 70.6  | 87.2  | 82.2  |       |
| Actuated g/C Ratio   | 0.10  | 0.10  |       | 0.10  | 0.10  | 0.70  | 0.64  | 0.79  | 0.75  |       |
| v/c Ratio            | 0.12  | 0.19  |       | 0.49  | 0.58  | 0.03  | 0.35  | 0.44  | 0.32  |       |
| Control Delay        | 44.5  | 15.7  |       | 57.3  | 13.6  | 5.2   | 13.7  | 8.0   | 7.6   |       |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Total Delay          | 44.5  | 15.7  |       | 57.3  | 13.6  | 5.2   | 13.7  | 8.0   | 7.6   |       |
| LOS                  | D     | B     |       | E     | B     | A     | B     | A     | A     |       |
| Approach Delay       | 24.3  |       |       |       | 25.2  |       | 13.5  |       | 7.7   |       |
| Approach LOS         | C     |       |       |       | C     |       | B     |       | A     |       |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 34 (31%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.58  
 Intersection Signal Delay: 12.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 60.4%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 55: Beauregard St & N Armistead St



Phasings  
55: Beauregard St & N Armistead St

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|
| Protected Phases        |       | 4     |       |       | 4     |       | 5    | 2     | 1     | 6     |
| Permitted Phases        | 4     |       | 4     | 4     |       | 4     | 2    |       | 6     |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 5.0  | 12.0  | 5.0   | 12.0  |
| Minimum Split (s)       | 36.5  | 36.5  | 36.5  | 36.5  | 36.5  | 36.5  | 10.0 | 22.0  | 10.0  | 22.0  |
| Total Split (s)         | 39.0  | 39.0  | 39.0  | 39.0  | 39.0  | 39.0  | 10.0 | 45.0  | 26.0  | 61.0  |
| Total Split (%)         | 35.5% | 35.5% | 35.5% | 35.5% | 35.5% | 35.5% | 9.1% | 40.9% | 23.6% | 55.5% |
| Maximum Green (s)       | 32.5  | 32.5  | 32.5  | 32.5  | 32.5  | 32.5  | 5.0  | 39.0  | 21.0  | 55.0  |
| Yellow Time (s)         | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.0  | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0  | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       |       |       | Lead | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |      |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2  | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None | C-Max | None  | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |      | 4.0   |       | 4.0   |
| Flash Dont Walk (s)     | 23.0  | 23.0  | 23.0  | 23.0  | 23.0  | 23.0  |      | 12.0  |       | 12.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     | 0     |      | 0     |       | 0     |
| 90th %ile Green (s)     | 16.6  | 16.6  | 16.6  | 16.6  | 16.6  | 16.6  | 5.0  | 59.4  | 16.5  | 70.9  |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Max  | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 12.9  | 12.9  | 12.9  | 12.9  | 12.9  | 12.9  | 5.0  | 67.2  | 12.4  | 74.6  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Max  | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 10.9  | 10.9  | 10.9  | 10.9  | 10.9  | 10.9  | 0.0  | 72.4  | 9.2   | 86.6  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Skip | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 8.9   | 8.9   | 8.9   | 8.9   | 8.9   | 8.9   | 0.0  | 75.6  | 8.0   | 88.6  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Skip | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 0.0  | 78.6  | 6.9   | 90.5  |
| 10th %ile Term Code     | Min   | Min   | Min   | Min   | Min   | Min   | Skip | Coord | Gap   | Coord |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 34 (31%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
56: Beauregard St & Quantrell Ave

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | WBL   | WBR   | NBT  | NBR   | SBL   | SBT  |
|---------------------|-------|-------|------|-------|-------|------|
| Lane Configurations | ↔     | ↔     | ↑    | ↔     | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           | 0%    |       | 0%   |       |       | 0%   |
| Storage Length (ft) | 0     | 50    |      | 85    | 100   |      |
| Storage Lanes       | 1     | 1     |      | 1     | 1     |      |
| Taper Length (ft)   | 50    |       |      |       | 50    |      |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95 | 1.00  | 1.00  | 0.95 |
| Ped Bike Factor     | 0.98  |       |      |       |       |      |
| Frt                 |       | 0.850 |      | 0.850 |       |      |
| Flt Protected       | 0.950 |       |      |       | 0.950 |      |
| Satd. Flow (prot)   | 1770  | 1583  | 3539 | 1583  | 1770  | 3539 |
| Flt Permitted       | 0.950 |       |      |       | 0.366 |      |
| Satd. Flow (perm)   | 1731  | 1583  | 3539 | 1583  | 682   | 3539 |
| Right Turn on Red   |       | Yes   |      | Yes   |       |      |
| Satd. Flow (RTOR)   |       | 54    |      | 129   |       |      |
| Link Speed (mph)    | 30    |       | 35   |       | 35    |      |
| Link Distance (ft)  | 751   |       | 931  |       | 1020  |      |
| Travel Time (s)     | 17.1  |       | 18.1 |       | 19.9  |      |

Intersection Summary

Area Type: Other

**Timings**  
**56: Beauregard St & Quantrell Ave**

2035 Market with Traffic Mitigation  
 PM PEAK

| Lane Group           | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↑     | ↔     | ↔     | ↑     |
| Volume (vph)         | 135   | 50    | 700   | 120   | 100   | 750   |
| Turn Type            | NA    | Perm  | NA    | Perm  | Perm  | NA    |
| Protected Phases     | 4     |       | 2     |       |       | 2     |
| Permitted Phases     |       | 4     |       | 2     | 2     |       |
| Detector Phase       | 4     | 4     | 2     | 2     | 2     | 2     |
| Switch Phase         |       |       |       |       |       |       |
| Minimum Initial (s)  | 6.0   | 6.0   | 10.0  | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)    | 12.0  | 12.0  | 16.0  | 16.0  | 16.0  | 16.0  |
| Total Split (s)      | 19.0  | 19.0  | 36.0  | 36.0  | 36.0  | 36.0  |
| Total Split (%)      | 34.5% | 34.5% | 65.5% | 65.5% | 65.5% | 65.5% |
| Yellow Time (s)      | 3.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |
| Recall Mode          | None  | None  | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s)  | 9.6   | 9.6   | 37.0  | 37.0  | 37.0  | 37.0  |
| Actuated g/C Ratio   | 0.17  | 0.17  | 0.67  | 0.67  | 0.67  | 0.67  |
| v/c Ratio            | 0.47  | 0.17  | 0.32  | 0.12  | 0.24  | 0.34  |
| Control Delay        | 24.8  | 7.4   | 5.9   | 1.7   | 3.0   | 2.2   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 24.8  | 7.4   | 5.9   | 1.7   | 3.0   | 2.2   |
| LOS                  | C     | A     | A     | A     | A     | A     |
| Approach Delay       | 20.0  |       | 5.3   |       |       | 2.3   |
| Approach LOS         | C     |       | A     |       |       | A     |

**Intersection Summary**

Cycle Length: 55  
 Actuated Cycle Length: 55  
 Offset: 8 (15%), Referenced to phase 2:NBSB, Start of Green  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.47  
 Intersection Signal Delay: 5.4  
 Intersection LOS: A  
 Intersection Capacity Utilization 50.2%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 56: Beauregard St & Quantrell Ave



**Phasings**  
**56: Beauregard St & Quantrell Ave**

2035 Market with Traffic Mitigation  
 PM PEAK

| Lane Group              | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 4     |       | 2     |       |       | 2     |
| Permitted Phases        |       | 4     |       | 2     | 2     |       |
| Minimum Initial (s)     | 6.0   | 6.0   | 10.0  | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 12.0  | 12.0  | 16.0  | 16.0  | 16.0  | 16.0  |
| Total Split (s)         | 19.0  | 19.0  | 36.0  | 36.0  | 36.0  | 36.0  |
| Total Split (%)         | 34.5% | 34.5% | 65.5% | 65.5% | 65.5% | 65.5% |
| Maximum Green (s)       | 13.0  | 13.0  | 30.0  | 30.0  | 30.0  | 30.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s)           |       |       |       |       |       |       |
| Flash Dont Walk (s)     |       |       |       |       |       |       |
| Pedestrian Calls (#/hr) |       |       |       |       |       |       |
| 90th %ile Green (s)     | 13.0  | 13.0  | 30.0  | 30.0  | 30.0  | 30.0  |
| 90th %ile Term Code     | Max   | Max   | Coord | Coord | Coord | Coord |
| 70th %ile Green (s)     | 11.2  | 11.2  | 31.8  | 31.8  | 31.8  | 31.8  |
| 70th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 50th %ile Green (s)     | 9.7   | 9.7   | 33.3  | 33.3  | 33.3  | 33.3  |
| 50th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 30th %ile Green (s)     | 8.2   | 8.2   | 34.8  | 34.8  | 34.8  | 34.8  |
| 30th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   | 49.0  | 49.0  | 49.0  | 49.0  |
| 10th %ile Term Code     | Skip  | Skip  | Coord | Coord | Coord | Coord |

**Intersection Summary**

Cycle Length: 55  
 Actuated Cycle Length: 55  
 Offset: 8 (15%), Referenced to phase 2:NBSB, Start of Green  
 Control Type: Actuated-Coordinated



Lanes and Geometrics 2035 Market with Traffic Mitigation  
 58: Lincoln Rd/Gloucester Rd & Beauregard St PM PEAK

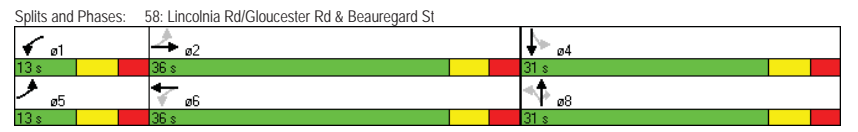
| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT  | WBR  | NBL  | NBT  | NBR   | SBL  | SBT   | SBR  |
|---------------------|-------|------|------|-------|------|------|------|------|-------|------|-------|------|
| Lane Configurations | ↔     | ↕    | ↔    | ↔     | ↕    | ↔    | ↔    | ↕    | ↔     | ↔    | ↕     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12   | 12   | 12   | 12   | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |      | 0%   |       | 0%   |      | 0%   |      | 0%    |      | 0%    |      |
| Storage Length (ft) | 175   |      | 0    | 175   |      | 0    | 0    |      | 0     | 0    |       | 0    |
| Storage Lanes       | 1     |      | 0    | 1     |      | 0    | 0    |      | 1     | 0    |       | 0    |
| Taper Length (ft)   | 50    |      |      | 50    |      |      | 50   |      | 50    |      |       | 50   |
| 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 |
| Ped Bike Factor     | 0.99  |      |      |       |      |      |      |      | 0.99  |      |       |      |
| Frt                 | 0.972 |      |      |       |      |      |      |      | 0.850 |      | 0.865 |      |
| Flt Protected       | 0.950 |      |      | 0.950 |      |      |      |      | 0.950 |      |       |      |
| Satd. Flow (prot)   | 1770  | 3420 | 0    | 1770  | 3539 | 0    | 0    | 1770 | 1583  | 0    | 1611  | 0    |
| Flt Permitted       | 0.297 |      |      | 0.182 |      |      |      |      | 0.754 |      |       |      |
| Satd. Flow (perm)   | 553   | 3420 | 0    | 339   | 3539 | 0    | 0    | 1405 | 1561  | 0    | 1611  | 0    |
| Right Turn on Red   |       |      | Yes  |       |      | Yes  |      |      | Yes   |      |       | Yes  |
| Satd. Flow (RTOR)   | 39    |      |      |       |      |      |      |      | 113   |      | 229   |      |
| Link Speed (mph)    | 35    |      |      |       | 35   |      |      |      | 35    |      | 30    |      |
| Link Distance (ft)  | 545   |      |      |       | 931  |      |      |      | 614   |      | 831   |      |
| Travel Time (s)     | 10.6  |      |      |       | 18.1 |      |      |      | 12.0  |      | 18.9  |      |

Intersection Summary  
 Area Type: Other

Timings 2035 Market with Traffic Mitigation  
 58: Lincoln Rd/Gloucester Rd & Beauregard St PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↕     | ↕     |
| Volume (vph)         | 20    | 715   | 120   | 765   | 290   | 0     | 105   | 0     |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     |       | 8     |       | 4     |
| Permitted Phases     | 2     |       | 6     |       | 8     |       | 8     |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 8     | 8     | 8     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 13.0  | 17.0  | 13.0  | 17.0  | 15.0  | 15.0  | 15.0  | 15.0  |
| Total Split (s)      | 13.0  | 36.0  | 13.0  | 36.0  | 31.0  | 31.0  | 31.0  | 31.0  |
| Total Split (%)      | 16.3% | 45.0% | 16.3% | 45.0% | 38.8% | 38.8% | 38.8% | 38.8% |
| Yellow Time (s)      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | None  | None  | None  |
| Act Effct Green (s)  | 38.5  | 33.8  | 42.0  | 39.6  |       | 21.2  | 21.2  | 21.2  |
| Actuated g/C Ratio   | 0.48  | 0.42  | 0.52  | 0.50  |       | 0.26  | 0.26  | 0.26  |
| v/c Ratio            | 0.06  | 0.64  | 0.44  | 0.47  |       | 0.84  | 0.23  | 0.01  |
| Control Delay        | 6.2   | 18.8  | 14.6  | 16.6  |       | 47.7  | 5.7   | 0.0   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Total Delay          | 6.2   | 18.8  | 14.6  | 16.6  |       | 47.7  | 5.7   | 0.0   |
| LOS                  | A     | B     | B     | B     |       | D     | A     | A     |
| Approach Delay       | 18.6  |       | 16.3  |       | 36.6  |       | 0.0   |       |
| Approach LOS         | B     |       | B     |       | D     |       | A     |       |

Intersection Summary  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 19 (24%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.84  
 Intersection Signal Delay: 20.9 Intersection LOS: C  
 Intersection Capacity Utilization 72.3% ICU Level of Service C  
 Analysis Period (min) 15



Phasings 2035 Market with Traffic Mitigation  
 58: Lincolnia Rd/Gloucester Rd & Beauregard St PM PEAK

|                         | ↖     | →     | ↗     | ←     | ↖     | ↑     | ↗     | ↓     |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBT   |
| Protected Phases        | 5     | 2     | 1     | 6     |       | 8     |       | 4     |
| Permitted Phases        | 2     |       | 6     |       | 8     |       | 8     |       |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 13.0  | 17.0  | 13.0  | 17.0  | 15.0  | 15.0  | 15.0  | 15.0  |
| Total Split (s)         | 13.0  | 36.0  | 13.0  | 36.0  | 31.0  | 31.0  | 31.0  | 31.0  |
| Total Split (%)         | 16.3% | 45.0% | 16.3% | 45.0% | 38.8% | 38.8% | 38.8% | 38.8% |
| Maximum Green (s)       | 6.0   | 29.0  | 6.0   | 29.0  | 24.0  | 24.0  | 24.0  | 24.0  |
| Yellow Time (s)         | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | C-Min | None  | C-Min | None  | None  | None  | None  |
| Walk Time (s)           |       | 7.0   |       | 7.0   |       | 7.0   |       | 7.0   |
| Flash Dont Walk (s)     |       | 19.0  |       | 23.0  |       | 23.0  |       | 22.0  |
| Pedestrian Calls (#/hr) |       | 0     |       | 0     |       | 0     |       | 0     |
| 90th %ile Green (s)     | 6.0   | 29.0  | 6.0   | 29.0  | 24.0  | 24.0  | 24.0  | 24.0  |
| 90th %ile Term Code     | Max   | Coord | Max   | Coord | Max   | Max   | Max   | Hold  |
| 70th %ile Green (s)     | 6.0   | 29.0  | 6.0   | 29.0  | 24.0  | 24.0  | 24.0  | 24.0  |
| 70th %ile Term Code     | Max   | Coord | Max   | Coord | Max   | Max   | Max   | Hold  |
| 50th %ile Green (s)     | 0.0   | 28.4  | 7.4   | 42.8  | 23.2  | 23.2  | 23.2  | 23.2  |
| 50th %ile Term Code     | Skip  | Coord | Max   | Coord | Gap   | Gap   | Gap   | Hold  |
| 30th %ile Green (s)     | 0.0   | 31.7  | 7.3   | 46.0  | 20.0  | 20.0  | 20.0  | 20.0  |
| 30th %ile Term Code     | Skip  | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Hold  |
| 10th %ile Green (s)     | 0.0   | 51.0  | 0.0   | 51.0  | 15.0  | 15.0  | 15.0  | 15.0  |
| 10th %ile Term Code     | Skip  | Coord | Skip  | Coord | Gap   | Gap   | Gap   | Hold  |

**Intersection Summary**  
 Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 19 (24%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics 2035 Market with Traffic Mitigation  
 59: Beauregard St & N Chambliss St/Plaza at Landmark PM PEAK

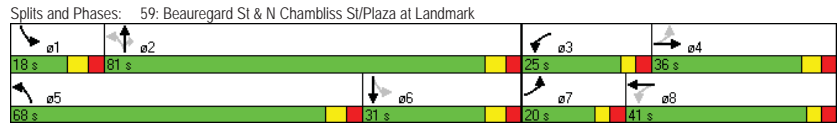
|                     | ↖     | →    | ↗     | ↖     | ←     | ↖    | ↑     | ↗    | ↖     | ↓     | ↖     |      |
|---------------------|-------|------|-------|-------|-------|------|-------|------|-------|-------|-------|------|
| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
| Lane Configurations | ↖     | ↖    | ↖     | ↖     | ↖     | ↖    | ↖     | ↖    | ↖     | ↖     | ↖     | ↖    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           |       | 0%   |       |       | 0%    |      |       | 0%   |       |       | 0%    |      |
| Storage Length (ft) | 0     |      | 75    | 0     |       | 0    | 200   |      | 140   | 170   |       | 0    |
| Storage Lanes       | 1     |      | 1     | 1     |       | 0    | 1     |      | 1     | 1     |       | 0    |
| Taper Length (ft)   | 50    |      |       | 50    |       |      | 50    |      |       | 50    |       |      |
| Lane Util. Factor   | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 0.95 |
| Ped Bike Factor     |       |      |       |       | 0.99  |      |       |      | 0.98  |       |       |      |
| Frt                 |       |      | 0.850 |       | 0.910 |      |       |      | 0.850 |       | 0.994 |      |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (prot)   | 1770  | 1863 | 1583  | 1770  | 1680  | 0    | 1770  | 3539 | 1583  | 1770  | 3518  | 0    |
| Flt Permitted       | 0.558 |      |       | 0.465 |       |      | 0.231 |      |       | 0.392 |       |      |
| Satd. Flow (perm)   | 1039  | 1863 | 1583  | 866   | 1680  | 0    | 430   | 3539 | 1547  | 730   | 3518  | 0    |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |       | Yes  |       | Yes   |       | Yes  |
| Satd. Flow (RTOR)   |       |      | 606   |       | 43    |      |       |      | 199   |       | 2     |      |
| Link Speed (mph)    |       | 30   |       |       | 25    |      |       | 25   |       |       | 35    |      |
| Link Distance (ft)  |       | 622  |       |       | 252   |      |       | 846  |       |       | 464   |      |
| Travel Time (s)     |       | 14.1 |       |       | 6.9   |      |       | 23.1 |       |       | 9.0   |      |

**Intersection Summary**  
 Area Type: Other

**Timings** 2035 Market with Traffic Mitigation  
**59: Beauregard St & N Chambliss St/Plaza at Landmark** PM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 175   | 85    | 570   | 310   | 60    | 595   | 635   | 240   | 100   | 470   |
| Turn Type            | pm+pt | NA    | Free  | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     | 5     | 2     |       | 1     | 6     |
| Permitted Phases     | 4     |       | Free  | 8     |       | 2     |       | 2     | 6     |       |
| Detector Phase       | 7     | 4     |       | 3     | 8     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   |       | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 1.0   | 4.0   |
| Minimum Split (s)    | 10.0  | 36.0  |       | 10.0  | 22.0  | 12.0  | 22.0  | 22.0  | 12.0  | 22.0  |
| Total Split (s)      | 20.0  | 36.0  | 0.0   | 25.0  | 41.0  | 68.0  | 81.0  | 81.0  | 18.0  | 31.0  |
| Total Split (%)      | 12.5% | 22.5% | 0.0%  | 15.6% | 25.6% | 42.5% | 50.6% | 50.6% | 11.3% | 19.4% |
| Yellow Time (s)      | 3.0   | 4.0   |       | 3.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   |       | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -5.0  |
| Total Lost Time (s)  | 6.0   | 7.0   | 4.0   | 6.0   | 6.0   | 7.0   | 7.0   | 7.0   | 7.0   | 2.0   |
| Lead/Lag             | Lead  | Lag   |       | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  |       | None  | None  | C-Min | C-Min | None  | C-Min |       |
| Act Effct Green (s)  | 28.1  | 13.2  | 160.0 | 39.2  | 20.1  | 107.0 | 92.0  | 92.0  | 52.1  | 49.1  |
| Actuated g/C Ratio   | 0.18  | 0.08  | 1.00  | 0.24  | 0.13  | 0.67  | 0.58  | 0.58  | 0.33  | 0.31  |
| v/c Ratio            | 0.76  | 0.59  | 0.39  | 1.03  | 0.65  | 0.85  | 0.34  | 0.26  | 0.37  | 0.49  |
| Control Delay        | 72.6  | 85.6  | 0.7   | 111.9 | 61.0  | 26.8  | 14.1  | 2.2   | 23.9  | 45.0  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.4   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 72.6  | 85.6  | 0.7   | 111.9 | 61.0  | 27.2  | 14.1  | 2.2   | 23.9  | 45.0  |
| LOS                  | E     | F     | A     | F     | E     | C     | B     | A     | C     | D     |
| Approach Delay       |       | 24.5  |       |       | 95.2  |       | 17.5  |       |       | 41.4  |
| Approach LOS         |       | C     |       |       | F     |       | B     |       |       | D     |

**Intersection Summary**  
 Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 117 (73%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.03  
 Intersection Signal Delay: 34.1 Intersection LOS: C  
 Intersection Capacity Utilization 88.2% ICU Level of Service E  
 Analysis Period (min) 15



**Phasings** 2035 Market with Traffic Mitigation  
**59: Beauregard St & N Chambliss St/Plaza at Landmark** PM PEAK

| Lane Group              | EBL   | EBT   | EBR  | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 7     | 4     |      | 3     | 8     | 5     | 2     |       | 1     | 6     |
| Permitted Phases        | 4     |       | Free | 8     |       | 2     |       | 2     | 6     |       |
| Minimum Initial (s)     | 4.0   | 4.0   |      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 1.0   | 4.0   |
| Minimum Split (s)       | 10.0  | 36.0  |      | 10.0  | 22.0  | 12.0  | 22.0  | 22.0  | 12.0  | 22.0  |
| Total Split (s)         | 20.0  | 36.0  | 0.0  | 25.0  | 41.0  | 68.0  | 81.0  | 81.0  | 18.0  | 31.0  |
| Total Split (%)         | 12.5% | 22.5% | 0.0% | 15.6% | 25.6% | 42.5% | 50.6% | 50.6% | 11.3% | 19.4% |
| Maximum Green (s)       | 14.0  | 29.0  |      | 19.0  | 35.0  | 61.0  | 74.0  | 74.0  | 11.0  | 24.0  |
| Yellow Time (s)         | 3.0   | 4.0   |      | 3.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   |      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   |      | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |      |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   |      | 3.0   | 3.0   | 2.0   | 4.0   | 4.0   | 2.0   | 4.0   |
| Minimum Gap (s)         | 3.0   | 3.0   |      | 3.0   | 3.0   | 2.0   | 4.0   | 4.0   | 2.0   | 4.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  |      | None  | None  | None  | C-Min | C-Min | None  | C-Min |
| Walk Time (s)           |       | 7.0   |      |       | 5.0   |       |       |       |       |       |
| Flash Dont Walk (s)     |       | 22.0  |      |       | 11.0  |       |       |       |       |       |
| Pedestrian Calls (#/hr) |       | 0     |      |       | 0     |       |       |       |       |       |
| 90th %ile Green (s)     | 14.0  | 18.4  |      | 19.0  | 24.4  | 69.4  | 85.0  | 85.0  | 10.6  | 26.2  |
| 90th %ile Term Code     | Max   | Hold  |      | Max   | Gap   | Gap   | Coord | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 14.0  | 15.2  |      | 19.0  | 21.2  | 62.5  | 89.9  | 89.9  | 8.9   | 36.3  |
| 70th %ile Term Code     | Max   | Gap   |      | Max   | Hold  | Gap   | Coord | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 14.0  | 13.2  |      | 19.0  | 19.2  | 56.6  | 93.0  | 93.0  | 7.8   | 44.2  |
| 50th %ile Term Code     | Max   | Gap   |      | Max   | Hold  | Gap   | Coord | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 14.2  | 11.1  |      | 19.2  | 17.1  | 50.1  | 95.8  | 95.8  | 6.9   | 52.6  |
| 30th %ile Term Code     | Max   | Gap   |      | Max   | Hold  | Gap   | Coord | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 13.2  | 8.2   |      | 22.7  | 18.7  | 40.7  | 96.3  | 96.3  | 5.8   | 61.4  |
| 10th %ile Term Code     | Gap   | Gap   |      | Gap   | Hold  | Gap   | Coord | Coord | Gap   | Coord |

**Intersection Summary**  
 Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 117 (73%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

61: N Beauregard St/Beauregard St & Route 236

2035 Market with Traffic Mitigation

PM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|------|------|-------|-------|------|-------|------|-------|-------|-------|------|
| Lane Configurations | ↔↔    | ↔↔   | ↔    | ↔↔    | ↔↔    | ↔    | ↔     | ↔    | ↔     | ↔     | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           | 0%    |      | 0%   |       | 0%    |      | 0%    |      | 0%    |       | 0%    |      |
| Storage Length (ft) | 600   |      | 0    | 215   |       | 500  | 120   |      | 0     | 0     |       | 0    |
| Storage Lanes       | 2     |      | 0    | 1     |       | 1    |       |      | 1     | 1     |       | 1    |
| Taper Length (ft)   | 50    |      |      | 50    |       | 50   |       |      | 50    |       |       | 50   |
| Lane Util. Factor   | 0.97  | 0.91 | 0.91 | 1.00  | 0.91  | 1.00 | 1.00  | 1.00 | 1.00  | 0.95  | 0.95  | 1.00 |
| Ped Bike Factor     | 1.00  |      |      |       | 0.98  |      |       |      | 0.98  |       | 0.97  |      |
| Frt                 | 0.995 |      |      |       | 0.850 |      |       |      | 0.850 |       | 0.850 |      |
| Flt Protected       | 0.950 |      |      | 0.950 |       |      | 0.950 |      |       | 0.950 | 0.969 |      |
| Satd. Flow (prot)   | 3433  | 5051 | 0    | 1770  | 5085  | 1583 | 1770  | 1863 | 1583  | 1681  | 1715  | 1583 |
| Flt Permitted       | 0.950 |      |      | 0.950 |       |      | 0.950 |      |       | 0.950 | 0.969 |      |
| Satd. Flow (perm)   | 3433  | 5051 | 0    | 1770  | 5085  | 1549 | 1770  | 1863 | 1546  | 1681  | 1715  | 1539 |
| Right Turn on Red   |       |      | Yes  |       |       | Yes  |       |      | Yes   |       |       | Yes  |
| Satd. Flow (RTOR)   | 4     |      |      |       | 161   |      |       |      | 11    |       | 289   |      |
| Link Speed (mph)    | 40    |      |      |       | 40    |      |       |      | 25    |       | 25    |      |
| Link Distance (ft)  | 1126  |      |      |       | 1020  |      |       |      | 665   |       | 846   |      |
| Travel Time (s)     | 19.2  |      |      |       | 17.4  |      |       |      | 18.1  |       | 23.1  |      |

Intersection Summary

Area Type: Other

Timings

61: N Beauregard St/Beauregard St & Route 236

2035 Market with Traffic Mitigation

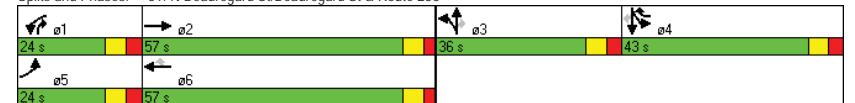
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔↔    | ↔↔    | ↔     | ↔↔    | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 435   | 1200  | 120   | 1600  | 840   | 175   | 195   | 150   | 700   | 160   | 490   |
| Turn Type            | Prot  | NA    | Prot  | NA    | pm+ov | Split | NA    | pm+ov | Split | NA    | Perm  |
| Protected Phases     | 5     | 2     | 1     | 6     | 4     | 3     | 3     | 1     | 4     | 4     |       |
| Permitted Phases     |       |       |       |       | 6     |       |       | 3     |       |       | 4     |
| Detector Phase       | 5     | 2     | 1     | 6     | 4     | 3     | 3     | 1     | 4     | 4     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 8.0   | 20.0  | 8.0   | 20.0  | 8.0   | 4.0   | 4.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)    | 15.0  | 26.5  | 15.0  | 28.5  | 36.0  | 36.0  | 36.0  | 15.0  | 36.0  | 36.0  | 36.0  |
| Total Split (s)      | 24.0  | 57.0  | 24.0  | 57.0  | 43.0  | 36.0  | 36.0  | 24.0  | 43.0  | 43.0  | 43.0  |
| Total Split (%)      | 15.0% | 35.6% | 15.0% | 35.6% | 26.9% | 22.5% | 22.5% | 15.0% | 26.9% | 26.9% | 26.9% |
| Yellow Time (s)      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 2.5   | 3.0   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | -3.0  | -2.5  | -3.0  | -2.5  | -3.0  | -3.0  | -3.0  | -3.0  | -5.0  | -5.0  | -5.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lead  | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | None  | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 20.0  | 55.3  | 17.7  | 53.0  | 97.9  | 26.1  | 26.1  | 43.7  | 46.9  | 46.9  | 46.9  |
| Actuated g/C Ratio   | 0.12  | 0.35  | 0.11  | 0.33  | 0.61  | 0.16  | 0.16  | 0.27  | 0.29  | 0.29  | 0.29  |
| v/c Ratio            | 1.09  | 0.76  | 0.66  | 1.02  | 0.89  | 0.65  | 0.69  | 0.37  | 0.93  | 0.93  | 0.80  |
| Control Delay        | 132.8 | 50.3  | 84.3  | 79.5  | 24.9  | 73.0  | 74.8  | 23.8  | 65.1  | 64.1  | 22.1  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 132.8 | 50.3  | 84.3  | 79.5  | 24.9  | 73.0  | 74.8  | 23.8  | 65.1  | 64.1  | 22.1  |
| LOS                  | F     | D     | F     | E     | C     | E     | E     | C     | E     | E     | C     |
| Approach Delay       | 71.7  |       | 61.8  |       | 59.5  |       | 49.2  |       |       |       |       |
| Approach LOS         | E     |       | E     |       | E     |       | D     |       |       |       |       |

Intersection Summary

Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 122 (76%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.09  
 Intersection Signal Delay: 61.5  
 Intersection LOS: E  
 Intersection Capacity Utilization 93.6%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 61: N Beauregard St/Beauregard St & Route 236



Phasings

61: N Beauregard St/Beauregard St & Route 236

2035 Market with Traffic Mitigation

PM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 5     | 2     | 1     | 6     | 4     | 3     | 3     | 1     | 4     | 4     |       |
| Permitted Phases        |       |       |       |       | 6     |       |       | 3     |       |       | 4     |
| Minimum Initial (s)     | 8.0   | 20.0  | 8.0   | 20.0  | 8.0   | 4.0   | 4.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)       | 15.0  | 26.5  | 15.0  | 28.5  | 36.0  | 36.0  | 36.0  | 15.0  | 36.0  | 36.0  | 36.0  |
| Total Split (s)         | 24.0  | 57.0  | 24.0  | 57.0  | 43.0  | 36.0  | 36.0  | 24.0  | 43.0  | 43.0  | 43.0  |
| Total Split (%)         | 15.0% | 35.6% | 15.0% | 35.6% | 26.9% | 22.5% | 22.5% | 15.0% | 26.9% | 26.9% | 26.9% |
| Maximum Green (s)       | 17.0  | 50.5  | 17.0  | 50.5  | 36.0  | 29.0  | 29.0  | 17.0  | 36.0  | 36.0  | 36.0  |
| Yellow Time (s)         | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 2.5   | 3.0   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lead  | Lag   | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | C-Min | None  | C-Min | None  | None  | None  | None  | None  | None  | None  |
| Walk Time (s)           |       | 7.0   |       | 7.0   |       | 7.0   |       | 7.0   |       | 7.0   |       |
| Flash Dont Walk (s)     |       |       |       | 14.0  |       | 22.0  |       | 22.0  |       | 22.0  |       |
| Pedestrian Calls (#/hr) |       |       |       | 0     |       | 0     |       | 0     |       | 0     |       |
| 90th %ile Green (s)     | 17.0  | 50.5  | 17.0  | 50.5  | 36.0  | 29.0  | 29.0  | 17.0  | 36.0  | 36.0  | 36.0  |
| 90th %ile Term Code     | Max   | Coord | Max   | Coord | Max   | Max   | Max   | Max   | Max   | Max   | Max   |
| 70th %ile Green (s)     | 17.0  | 50.5  | 17.0  | 50.5  | 37.9  | 27.1  | 27.1  | 17.0  | 37.9  | 37.9  | 37.9  |
| 70th %ile Term Code     | Max   | Coord | Max   | Coord | Max   | Gap   | Gap   | Max   | Max   | Max   | Max   |
| 50th %ile Green (s)     | 17.0  | 51.5  | 16.0  | 50.5  | 41.8  | 23.2  | 23.2  | 16.0  | 41.8  | 41.8  | 41.8  |
| 50th %ile Term Code     | Max   | Coord | Gap   | Coord | Max   | Gap   | Gap   | Max   | Max   | Max   | Max   |
| 30th %ile Green (s)     | 17.0  | 54.0  | 13.5  | 50.5  | 44.8  | 20.2  | 20.2  | 13.5  | 44.8  | 44.8  | 44.8  |
| 30th %ile Term Code     | Max   | Coord | Gap   | Coord | Max   | Gap   | Gap   | Max   | Max   | Max   | Max   |
| 10th %ile Green (s)     | 17.0  | 57.7  | 9.8   | 50.5  | 49.2  | 15.8  | 15.8  | 9.8   | 49.2  | 49.2  | 49.2  |
| 10th %ile Term Code     | Max   | Coord | Gap   | Coord | Max   | Gap   | Gap   | Max   | Max   | Max   | Max   |

Intersection Summary

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 122 (76%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Control Type: Actuated-Coordinated

Lanes and Geometrics

67: Beauregard St & Lincolnia Rd Spur

2035 Market with Traffic Mitigation

PM PEAK

| Lane Group          | EBL  | EBT  | WBT   | WBR  | SBL  | SBR  |
|---------------------|------|------|-------|------|------|------|
| Lane Configurations |      | ↑↑   | ↑↑    |      |      |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           |      | 0%   | 0%    |      | 0%   |      |
| Storage Length (ft) |      | 0    |       | 0    | 0    | 0    |
| Storage Lanes       |      | 0    |       | 0    | 0    | 0    |
| Taper Length (ft)   |      | 50   |       |      | 50   |      |
| Lane Util. Factor   | 1.00 | 0.95 | 0.95  | 0.95 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      |       |      |      |      |
| Frt                 |      |      | 0.933 |      |      |      |
| Flt Protected       |      |      |       |      |      |      |
| Satd. Flow (prot)   | 0    | 3539 | 3302  | 0    | 0    | 0    |
| Flt Permitted       |      |      |       |      |      |      |
| Satd. Flow (perm)   | 0    | 3539 | 3302  | 0    | 0    | 0    |
| Link Speed (mph)    |      | 35   | 35    |      | 25   |      |
| Link Distance (ft)  |      | 464  | 545   |      | 446  |      |
| Travel Time (s)     |      | 9.0  | 10.6  |      | 12.2 |      |

Intersection Summary

Area Type: Other

Lanes and Geometrics  
90: N Jordan St & Seminary Rd/ Seminary Rd

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBT   | EBR  | WBL  | WBT   | NBL   | NBR   |
|---------------------|-------|------|------|-------|-------|-------|
| Lane Configurations | ↔↔    |      |      | ↔↔    | ↔     | ↔     |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900  |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12    |
| Grade (%)           | 0%    |      |      | 0%    | 0%    |       |
| Storage Length (ft) |       | 0    | 0    |       | 0     | 250   |
| Storage Lanes       |       | 0    | 0    |       | 1     | 1     |
| Taper Length (ft)   |       |      | 50   |       | 50    |       |
| Lane Util. Factor   | 0.95  | 0.95 | 0.95 | 0.95  | 1.00  | 1.00  |
| Ped Bike Factor     | 0.99  |      |      |       |       |       |
| Frt                 | 0.958 |      |      |       |       | 0.850 |
| Flt Protected       |       |      |      | 0.996 | 0.950 |       |
| Satd. Flow (prot)   | 3352  | 0    | 0    | 3525  | 1770  | 1583  |
| Flt Permitted       |       |      |      | 0.658 | 0.950 |       |
| Satd. Flow (perm)   | 3352  | 0    | 0    | 2329  | 1770  | 1583  |
| Right Turn on Red   |       | Yes  |      |       |       | Yes   |
| Satd. Flow (RTOR)   | 90    |      |      |       |       | 22    |
| Link Speed (mph)    | 35    |      |      | 35    | 25    |       |
| Link Distance (ft)  | 744   |      |      | 747   | 1357  |       |
| Travel Time (s)     | 14.5  |      |      | 14.6  | 37.0  |       |

Intersection Summary

Area Type: Other

Timings  
90: N Jordan St & Seminary Rd/ Seminary Rd

2035 Market with Traffic Mitigation  
PM PEAK

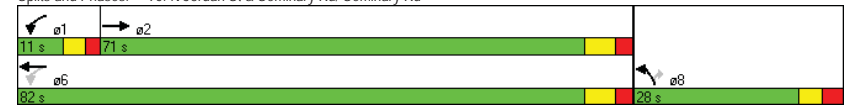
| Lane Group           | EBT   | WBL   | WBT   | NBL   | NBR   |
|----------------------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔↔    |       | ↔↔    | ↔     | ↔     |
| Volume (vph)         | 980   | 70    | 835   | 215   | 20    |
| Turn Type            | NA    | pm+pt | NA    | NA    | Perm  |
| Protected Phases     | 2     | 1     | 6     | 8     |       |
| Permitted Phases     |       | 6     |       |       | 8     |
| Detector Phase       | 2     | 1     | 6     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 10.0  | 6.0   | 16.0  | 6.0   | 6.0   |
| Minimum Split (s)    | 30.5  | 11.0  | 30.5  | 22.0  | 22.0  |
| Total Split (s)      | 71.0  | 11.0  | 82.0  | 28.0  | 28.0  |
| Total Split (%)      | 64.5% | 10.0% | 74.5% | 25.5% | 25.5% |
| Yellow Time (s)      | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.5   | 2.0   | 2.5   | 3.0   | 3.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.5   | 5.0   | 6.5   | 6.0   | 6.0   |
| Lead/Lag             | Lag   | Lead  |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |
| Recall Mode          | C-Max | None  | C-Max | None  | None  |
| Act Effct Green (s)  | 78.9  |       | 78.9  | 18.6  | 18.6  |
| Actuated g/C Ratio   | 0.72  |       | 0.72  | 0.17  | 0.17  |
| v/c Ratio            | 0.60  |       | 0.58  | 0.77  | 0.08  |
| Control Delay        | 2.2   |       | 9.8   | 60.7  | 14.6  |
| Queue Delay          | 0.1   |       | 0.0   | 0.0   | 0.0   |
| Total Delay          | 2.2   |       | 9.8   | 60.7  | 14.6  |
| LOS                  | A     |       | A     | E     | B     |
| Approach Delay       | 2.2   |       | 9.8   | 56.7  |       |
| Approach LOS         | A     |       | A     | E     |       |

|                     |      |  |      |      |      |
|---------------------|------|--|------|------|------|
| Act Effct Green (s) | 78.9 |  | 78.9 | 18.6 | 18.6 |
| Actuated g/C Ratio  | 0.72 |  | 0.72 | 0.17 | 0.17 |
| v/c Ratio           | 0.60 |  | 0.58 | 0.77 | 0.08 |
| Control Delay       | 2.2  |  | 9.8  | 60.7 | 14.6 |
| Queue Delay         | 0.1  |  | 0.0  | 0.0  | 0.0  |
| Total Delay         | 2.2  |  | 9.8  | 60.7 | 14.6 |
| LOS                 | A    |  | A    | E    | B    |
| Approach Delay      | 2.2  |  | 9.8  | 56.7 |      |
| Approach LOS        | A    |  | A    | E    |      |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 4 (4%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 10.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 92.4%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 90: N Jordan St & Seminary Rd/ Seminary Rd



Phasings

90: N Jordan St & Seminary Rd/ Seminary Rd

2035 Market with Traffic Mitigation

PM PEAK

|                         | →     | ↖     | ←     | ↗     | ↘     |
|-------------------------|-------|-------|-------|-------|-------|
| Lane Group              | EBT   | WBL   | WBT   | NBL   | NBR   |
| Protected Phases        | 2     | 1     | 6     | 8     |       |
| Permitted Phases        |       | 6     |       | 8     |       |
| Minimum Initial (s)     | 10.0  | 6.0   | 16.0  | 6.0   | 6.0   |
| Minimum Split (s)       | 30.5  | 11.0  | 30.5  | 22.0  | 22.0  |
| Total Split (s)         | 71.0  | 11.0  | 82.0  | 28.0  | 28.0  |
| Total Split (%)         | 64.5% | 10.0% | 74.5% | 25.5% | 25.5% |
| Maximum Green (s)       | 64.5  | 6.0   | 75.5  | 22.0  | 22.0  |
| Yellow Time (s)         | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.5   | 2.0   | 2.5   | 3.0   | 3.0   |
| Lead/Lag                | Lag   | Lead  |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | C-Max | None  | C-Max | None  | None  |
| Walk Time (s)           | 12.0  |       | 12.0  | 4.0   | 4.0   |
| Flash Dont Walk (s)     | 12.0  |       | 12.0  | 12.0  | 12.0  |
| Pedestrian Calls (#/hr) | 0     |       | 0     | 0     | 0     |
| 90th %ile Green (s)     | 75.5  | 0.0   | 75.5  | 22.0  | 22.0  |
| 90th %ile Term Code     | Coord | Skip  | Coord | Max   | Max   |
| 70th %ile Green (s)     | 75.5  | 0.0   | 75.5  | 22.0  | 22.0  |
| 70th %ile Term Code     | Coord | Skip  | Coord | Max   | Max   |
| 50th %ile Green (s)     | 78.0  | 0.0   | 78.0  | 19.5  | 19.5  |
| 50th %ile Term Code     | Coord | Skip  | Coord | Gap   | Gap   |
| 30th %ile Green (s)     | 80.8  | 0.0   | 80.8  | 16.7  | 16.7  |
| 30th %ile Term Code     | Coord | Skip  | Coord | Gap   | Gap   |
| 10th %ile Green (s)     | 84.7  | 0.0   | 84.7  | 12.8  | 12.8  |
| 10th %ile Term Code     | Coord | Skip  | Coord | Gap   | Gap   |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 4 (4%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

93: Hammond M.S./Encore Apts & Seminary Rd

2035 Market with Traffic Mitigation

PM PEAK

|                     | ↖     | →    | ↗    | ↖    | ←     | ↗    | ↖    | ↖     | ↖     | ↖     | ↖    | ↖    | ↖     |
|---------------------|-------|------|------|------|-------|------|------|-------|-------|-------|------|------|-------|
| Lane Group          | EBL   | EBT  | EBR  | WBL  | WBT   | WBR  | NBL  | NBT   | NBR   | SBL   | SBT  | SBR  |       |
| Lane Configurations | ↖     | ↖↖↖  |      |      | ↖↖    |      |      | ↖     | ↖     | ↖     |      | ↖    | ↖     |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900  | 1900  | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12   | 12   | 12   | 12    | 12   | 12   | 12    | 12    | 12    | 12   | 12   | 12    |
| Grade (%)           |       | 0%   |      |      | 0%    |      |      | 0%    |       |       | 0%   |      | 0%    |
| Storage Length (ft) | 100   |      | 0    | 0    |       | 0    | 0    |       | 0     | 0     |      | 0    | 0     |
| Storage Lanes       | 1     |      | 0    | 0    |       | 0    | 0    |       | 1     | 1     |      | 1    | 1     |
| Taper Length (ft)   | 50    |      |      | 50   |       |      |      | 50    |       |       | 50   |      | 50    |
| Lane Util. Factor   | 1.00  | 0.91 | 1.00 | 1.00 | 0.95  | 0.95 | 1.00 | 1.00  | 1.00  | 1.00  | 1.00 | 1.00 | 1.00  |
| Ped Bike Factor     |       |      |      |      |       |      |      |       |       |       |      |      |       |
| Frt                 |       |      |      |      | 0.995 |      |      |       | 0.850 |       |      |      | 0.850 |
| Flt Protected       | 0.950 |      |      |      |       |      |      | 0.950 |       | 0.950 |      |      |       |
| Satd. Flow (prot)   | 1770  | 5085 | 0    | 0    | 3522  | 0    | 0    | 1770  | 1583  | 1770  | 0    | 1583 |       |
| Flt Permitted       | 0.263 |      |      |      |       |      |      | 0.950 |       |       |      |      |       |
| Satd. Flow (perm)   | 490   | 5085 | 0    | 0    | 3522  | 0    | 0    | 1770  | 1583  | 1863  | 0    | 1583 |       |
| Right Turn on Red   |       |      | Yes  |      |       | Yes  |      |       | Yes   |       |      | Yes  |       |
| Satd. Flow (RTOR)   |       |      |      |      | 7     |      |      |       | 5     |       |      | 16   |       |
| Link Speed (mph)    |       | 35   |      |      | 35    |      |      | 25    |       |       | 25   |      |       |
| Link Distance (ft)  |       | 464  |      |      | 317   |      |      | 257   |       |       | 372  |      |       |
| Travel Time (s)     |       | 9.0  |      |      | 6.2   |      |      | 7.0   |       |       | 10.1 |      |       |

Intersection Summary

Area Type: Other

Timings

2035 Market with Traffic Mitigation

93: Hammond M.S./Encore Apts & Seminary Rd

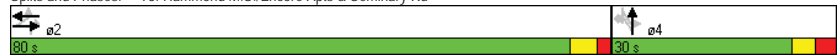
PM PEAK

| Lane Group           | EBL   | EBT   | WBT   | NBT   | NBR    | SBL   | SBR    |
|----------------------|-------|-------|-------|-------|--------|-------|--------|
| Lane Configurations  | ↔     | ↔↔↔   | ↔↔    | ↔     | ↔      | ↔     | ↔      |
| Volume (vph)         | 45    | 1445  | 960   | 0     | 5      | 5     | 15     |
| Turn Type            | Perm  | NA    | NA    | NA    | custom | D.Pm  | custom |
| Protected Phases     |       | 2     | 2     | 4     |        |       |        |
| Permitted Phases     | 2     |       |       |       | 2      | 4     | 4      |
| Detector Phase       | 2     | 2     | 2     | 4     | 2      | 4     | 4      |
| Switch Phase         |       |       |       |       |        |       |        |
| Minimum Initial (s)  | 10.0  | 10.0  | 10.0  | 6.0   | 10.0   | 6.0   | 6.0    |
| Minimum Split (s)    | 21.5  | 21.5  | 21.5  | 29.0  | 21.5   | 29.0  | 29.0   |
| Total Split (s)      | 80.0  | 80.0  | 80.0  | 30.0  | 80.0   | 30.0  | 30.0   |
| Total Split (%)      | 72.7% | 72.7% | 72.7% | 27.3% | 72.7%  | 27.3% | 27.3%  |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.0   | 3.5    | 3.0   | 3.0    |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 3.0   | 2.0    | 3.0   | 3.0    |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0    | 0.0   | 0.0    |
| Total Lost Time (s)  | 5.5   | 5.5   | 5.5   | 6.0   | 5.5    | 6.0   | 6.0    |
| Lead/Lag             |       |       |       |       |        |       |        |
| Lead-Lag Optimize?   |       |       |       |       |        |       |        |
| Recall Mode          | C-Max | C-Max | C-Max | None  | C-Max  | None  | None   |
| Act Effct Green (s)  | 99.1  | 99.1  | 99.1  | 6.4   | 99.1   | 6.4   | 6.4    |
| Actuated g/C Ratio   | 0.90  | 0.90  | 0.90  | 0.06  | 0.90   | 0.06  | 0.06   |
| v/c Ratio            | 0.11  | 0.34  | 0.34  | 0.05  | 0.00   | 0.05  | 0.15   |
| Control Delay        | 1.3   | 0.9   | 0.6   | 49.6  | 1.0    | 49.6  | 24.5   |
| Queue Delay          | 0.0   | 0.0   | 0.3   | 0.0   | 0.0    | 0.0   | 0.0    |
| Total Delay          | 1.3   | 0.9   | 0.9   | 49.6  | 1.0    | 49.6  | 24.5   |
| LOS                  | A     | A     | A     | D     | A      | D     | C      |
| Approach Delay       |       | 0.9   | 0.9   | 25.3  |        |       |        |
| Approach LOS         |       | A     | A     | C     |        |       |        |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 0 (0%), Referenced to phase 2:WBEB, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.34  
 Intersection Signal Delay: 1.2  
 Intersection LOS: A  
 Intersection Capacity Utilization 52.2%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 93: Hammond M.S./Encore Apts & Seminary Rd



Phasings

2035 Market with Traffic Mitigation

93: Hammond M.S./Encore Apts & Seminary Rd

PM PEAK

| Lane Group              | EBL   | EBT   | WBT   | NBT   | NBR   | SBL   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 2     | 2     | 4     |       |       |       |
| Permitted Phases        | 2     |       |       |       | 2     | 4     | 4     |
| Minimum Initial (s)     | 10.0  | 10.0  | 10.0  | 6.0   | 10.0  | 6.0   | 6.0   |
| Minimum Split (s)       | 21.5  | 21.5  | 21.5  | 29.0  | 21.5  | 29.0  | 29.0  |
| Total Split (s)         | 80.0  | 80.0  | 80.0  | 30.0  | 80.0  | 30.0  | 30.0  |
| Total Split (%)         | 72.7% | 72.7% | 72.7% | 27.3% | 72.7% | 27.3% | 27.3% |
| Maximum Green (s)       | 74.5  | 74.5  | 74.5  | 24.0  | 74.5  | 24.0  | 24.0  |
| Yellow Time (s)         | 3.5   | 3.5   | 3.5   | 3.0   | 3.5   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   |
| Lead/Lag                |       |       |       |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | C-Max | C-Max | C-Max | None  | C-Max | None  | None  |
| Walk Time (s)           |       |       |       | 7.0   |       | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |       |       | 16.0  |       | 16.0  | 16.0  |
| Pedestrian Calls (#/hr) |       |       |       | 0     |       | 0     | 0     |
| 90th %ile Green (s)     | 91.1  | 91.1  | 91.1  | 7.4   | 91.1  | 7.4   | 7.4   |
| 90th %ile Term Code     | Coord | Coord | Coord | Gap   | Coord | Gap   | Gap   |
| 70th %ile Green (s)     | 92.1  | 92.1  | 92.1  | 6.4   | 92.1  | 6.4   | 6.4   |
| 70th %ile Term Code     | Coord | Coord | Coord | Gap   | Coord | Gap   | Gap   |
| 50th %ile Green (s)     | 92.5  | 92.5  | 92.5  | 6.0   | 92.5  | 6.0   | 6.0   |
| 50th %ile Term Code     | Coord | Coord | Coord | Min   | Coord | Min   | Min   |
| 30th %ile Green (s)     | 104.5 | 104.5 | 104.5 | 0.0   | 104.5 | 0.0   | 0.0   |
| 30th %ile Term Code     | Coord | Coord | Coord | Skip  | Coord | Skip  | Skip  |
| 10th %ile Green (s)     | 104.5 | 104.5 | 104.5 | 0.0   | 104.5 | 0.0   | 0.0   |
| 10th %ile Term Code     | Coord | Coord | Coord | Skip  | Coord | Skip  | Skip  |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 0 (0%), Referenced to phase 2:WBEB, Start of Yellow  
 Control Type: Actuated-Coordinated



Lanes and Geometrics 2035 Market with Traffic Mitigation  
PM PEAK  
99: Beauregard St & New Southern Towers Street

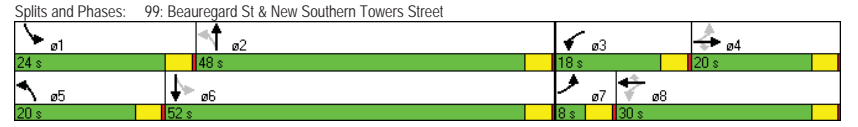
| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT  | WBR  | NBL   | NBT  | NBR  | SBL   | SBT  | SBR  |
|---------------------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|
| Lane Configurations | ↔     | ↔    | ↔    | ↔     | ↔    | ↔    | ↔     | ↔    | ↔    | ↔     | ↔    | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12   | 12   |
| Grade (%)           | 0%    |      |      | 0%    |      |      | -4%   |      |      | 2%    |      |      |
| Storage Length (ft) | 150   |      | 150  | 150   |      | 150  | 150   |      | 0    | 150   |      | 0    |
| Storage Lanes       | 1     |      | 1    | 1     |      | 1    | 1     |      | 0    | 1     |      | 0    |
| Taper Length (ft)   | 50    |      | 50   | 50    |      | 50   | 50    |      | 50   | 50    |      | 50   |
| 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     | 0.850 |      |      | 0.850 |      |      | 0.960 |      |      | 0.993 |      |      |
| Frt Protected       | 0.950 |      |      | 0.950 |      |      | 0.950 |      |      | 0.950 |      |      |
| Satd. Flow (prot)   | 1770  | 1863 | 1583 | 1770  | 1863 | 1583 | 1805  | 3466 | 0    | 1752  | 3479 | 0    |
| Frt Permitted       | 0.740 |      |      | 0.489 |      |      | 0.226 |      |      | 0.329 |      |      |
| Satd. Flow (perm)   | 1378  | 1863 | 1583 | 911   | 1863 | 1583 | 429   | 3466 | 0    | 607   | 3479 | 0    |
| Right Turn on Red   |       |      | Yes  |       |      | Yes  |       |      | Yes  |       |      | Yes  |
| Satd. Flow (RTOR)   |       |      | 86   |       |      | 188  |       |      | 57   |       |      | 6    |
| Link Speed (mph)    |       | 25   |      |       | 25   |      |       |      | 35   |       |      | 35   |
| Link Distance (ft)  |       | 338  |      |       | 704  |      |       |      | 568  |       |      | 809  |
| Travel Time (s)     |       | 9.2  |      |       | 19.2 |      |       |      | 11.1 |       |      | 15.8 |

**Intersection Summary**  
Area Type: Other

Timings 2035 Market with Traffic Mitigation  
PM PEAK  
99: Beauregard St & New Southern Towers Street

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 35    | 55    | 80    | 155   | 25    | 175   | 40    | 585   | 205   | 685   |
| Turn Type            | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     |       | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 4     | 8     |       | 8     | 2     |       | 6     |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 8.0   | 20.0  | 20.0  | 8.0   | 20.0  | 20.0  | 20.0  | 20.0  | 8.0   | 20.0  |
| Total Split (s)      | 8.0   | 20.0  | 20.0  | 18.0  | 30.0  | 30.0  | 20.0  | 48.0  | 24.0  | 52.0  |
| Total Split (%)      | 7.3%  | 18.2% | 18.2% | 16.4% | 27.3% | 27.3% | 18.2% | 43.6% | 21.8% | 47.3% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   |
| 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   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       | Max   | C-Max | None  | C-Max |
| Recall Mode          | None  | None  | None  | None  | None  | None  | Max   | C-Max | None  | C-Max |
| Act Effct Green (s)  | 11.7  | 8.8   | 8.8   | 23.7  | 18.9  | 18.9  | 78.1  | 63.2  | 59.1  | 48.0  |
| Actuated g/C Ratio   | 0.11  | 0.08  | 0.08  | 0.22  | 0.17  | 0.17  | 0.71  | 0.57  | 0.54  | 0.44  |
| v/c Ratio            | 0.24  | 0.39  | 0.42  | 0.56  | 0.08  | 0.44  | 0.07  | 0.43  | 0.50  | 0.51  |
| Control Delay        | 35.7  | 54.9  | 16.3  | 43.4  | 37.4  | 9.0   | 6.4   | 14.8  | 13.5  | 15.7  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 35.7  | 54.9  | 16.3  | 43.4  | 37.4  | 9.0   | 6.4   | 14.8  | 13.5  | 15.7  |
| LOS                  | D     | D     | B     | D     | D     | A     | A     | B     | B     | B     |
| Approach Delay       |       | 32.8  |       |       | 26.0  |       |       | 14.4  |       | 15.2  |
| Approach LOS         |       | C     |       |       | C     |       |       | B     |       | B     |

**Intersection Summary**  
Cycle Length: 110  
Actuated Cycle Length: 110  
Offset: 54 (49%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
Natural Cycle: 70  
Control Type: Actuated-Coordinated  
Maximum v/c Ratio: 0.56  
Intersection Signal Delay: 17.9 Intersection LOS: B  
Intersection Capacity Utilization 59.7% ICU Level of Service B  
Analysis Period (min) 15



Phasings

99: Beauregard St & New Southern Towers Street

2035 Market with Traffic Mitigation

PM PEAK

| Lane Group              | EBL  | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 7    | 4     |       | 3     | 8     |       | 5     | 2     | 1     | 6     |
| Permitted Phases        | 4    |       | 4     | 8     |       | 8     | 2     |       | 6     |       |
| Minimum Initial (s)     | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 8.0  | 20.0  | 20.0  | 8.0   | 20.0  | 20.0  | 20.0  | 20.0  | 8.0   | 20.0  |
| Total Split (s)         | 8.0  | 20.0  | 20.0  | 18.0  | 30.0  | 30.0  | 20.0  | 48.0  | 24.0  | 52.0  |
| Total Split (%)         | 7.3% | 18.2% | 18.2% | 16.4% | 27.3% | 27.3% | 18.2% | 43.6% | 21.8% | 47.3% |
| Maximum Green (s)       | 4.0  | 16.0  | 16.0  | 14.0  | 26.0  | 26.0  | 16.0  | 44.0  | 20.0  | 48.0  |
| Yellow Time (s)         | 3.5  | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)        | 0.5  | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   |
| Lead/Lag                | Lead | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |      |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | None  | None  | None  | None  | None  | Max   | C-Max | None  | C-Max |
| Walk Time (s)           |      | 5.0   | 5.0   |       | 5.0   | 5.0   | 5.0   | 5.0   |       | 5.0   |
| Flash Dont Walk (s)     |      | 11.0  | 11.0  |       | 11.0  | 11.0  | 11.0  | 11.0  |       | 11.0  |
| Pedestrian Calls (#/hr) |      | 0     | 0     |       | 0     | 0     | 0     | 0     |       | 0     |
| 90th %ile Green (s)     | 4.0  | 12.1  | 12.1  | 14.0  | 22.1  | 22.1  | 19.9  | 51.1  | 16.8  | 48.0  |
| 90th %ile Term Code     | Max  | Gap   | Gap   | Max   | Hold  | Hold  | MaxR  | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 4.0  | 10.2  | 10.2  | 14.0  | 20.2  | 20.2  | 21.8  | 56.9  | 12.9  | 48.0  |
| 70th %ile Term Code     | Max  | Gap   | Gap   | Max   | Hold  | Hold  | MaxR  | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 4.0  | 8.8   | 8.8   | 14.0  | 18.8  | 18.8  | 23.2  | 60.8  | 10.4  | 48.0  |
| 50th %ile Term Code     | Max  | Gap   | Gap   | Max   | Hold  | Hold  | MaxR  | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 0.0  | 7.5   | 7.5   | 12.2  | 23.7  | 23.7  | 26.3  | 65.3  | 9.0   | 48.0  |
| 30th %ile Term Code     | Skip | Gap   | Gap   | Gap   | Hold  | Hold  | MaxR  | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 0.0  | 0.0   | 0.0   | 9.7   | 9.7   | 9.7   | 40.3  | 81.7  | 6.6   | 48.0  |
| 10th %ile Term Code     | Skip | Skip  | Skip  | Gap   | Hold  | Hold  | MaxR  | Coord | Gap   | Coord |

Intersection Summary

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 54 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Control Type: Actuated-Coordinated

Lanes and Geometrics

100: Mark Center Dr & New Southern Towers Street

2035 Market with Traffic Mitigation

PM PEAK

| Lane Group          | EBL  | EBT   | EBR  | WBL  | WBT   | WBR  | NBL  | NBT   | NBR  | SBL  | SBT   | SBR  |
|---------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Lane Configurations |      | ↕     |      |      | ↕     |      |      | ↕     |      |      | ↕     |      |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 3297  | 1900 | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12   |
| Grade (%)           |      | 0%    |      |      | 0%    |      |      | 0%    |      |      | 0%    |      |
| Storage Length (ft) | 0    |       | 0    | 0    |       | 0    | 0    |       | 0    | 0    |       | 0    |
| Storage Lanes       | 0    |       | 0    | 0    |       | 0    | 0    |       | 0    | 0    |       | 0    |
| Taper Length (ft)   | 50   |       | 50   | 50   |       | 50   | 50   |       | 50   | 50   |       | 50   |
| Lane Util. Factor   | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 0.95 | 0.95  | 0.95 | 0.95 | 0.95  | 0.95 |
| Ped Bike Factor     |      |       |      |      |       |      |      |       |      |      |       |      |
| Frt                 |      | 0.971 |      |      | 0.985 |      |      | 0.942 |      |      | 0.928 |      |
| Flt Protected       |      | 0.976 |      |      | 0.972 |      |      | 0.989 |      |      | 0.998 |      |
| Satd. Flow (prot)   | 0    | 1765  | 0    | 0    | 1783  | 0    | 0    | 3297  | 0    | 0    | 3278  | 0    |
| Flt Permitted       |      | 0.976 |      |      | 0.972 |      |      | 0.989 |      |      | 0.998 |      |
| Satd. Flow (perm)   | 0    | 1765  | 0    | 0    | 1783  | 0    | 0    | 3297  | 0    | 0    | 3278  | 0    |
| Link Speed (mph)    |      | 25    |      |      | 25    |      |      | 25    |      |      | 25    |      |
| Link Distance (ft)  |      | 704   |      |      | 420   |      |      | 642   |      |      | 447   |      |
| Travel Time (s)     |      | 19.2  |      |      | 11.5  |      |      | 17.5  |      |      | 12.2  |      |

Intersection Summary

Area Type: Other

Lanes and Geometrics  
102: Beauregard St & Roanoke Ave

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL   | NBT  | NBR   | SBL   | SBT  | SBR  |
|---------------------|-------|------|------|-------|-------|------|-------|------|-------|-------|------|------|
| Lane Configurations | ↔     | ↔    | ↔    | ↔     | ↔     | ↔    | ↔     | ↔    | ↔     | ↔     | ↔    | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12   |
| Grade (%)           | 0%    |      | 0%   |       | 0%    |      | 0%    |      | 0%    |       | 0%   |      |
| Storage Length (ft) | 200   |      | 0    | 150   |       | 250  | 150   |      | 0     | 150   |      | 0    |
| Storage Lanes       | 1     |      | 0    | 1     |       | 0    | 1     |      | 0     | 1     |      | 0    |
| Taper Length (ft)   | 50    |      |      | 50    |       |      | 50    |      |       | 50    |      |      |
| 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     |       |      |      |       |       |      |       |      |       |       |      |      |
| Frt                 | 0.931 |      |      |       | 0.891 |      |       |      | 0.993 |       |      |      |
| Flt Protected       | 0.950 |      |      | 0.950 |       |      | 0.950 |      |       | 0.950 |      |      |
| Satd. Flow (prot)   | 1770  | 1734 | 0    | 1770  | 1660  | 0    | 1770  | 3514 | 0     | 1770  | 3525 | 0    |
| Flt Permitted       | 0.704 |      |      | 0.711 |       |      | 0.306 |      |       | 0.346 |      |      |
| Satd. Flow (perm)   | 1311  | 1734 | 0    | 1324  | 1660  | 0    | 570   | 3514 | 0     | 645   | 3525 | 0    |
| Right Turn on Red   |       |      | Yes  |       |       | Yes  |       |      | Yes   |       |      | Yes  |
| Satd. Flow (RTOR)   |       | 32   |      |       | 59    |      |       | 5    |       |       | 3    |      |
| Link Speed (mph)    |       | 25   |      |       | 25    |      |       | 35   |       |       | 35   |      |
| Link Distance (ft)  |       | 767  |      |       | 695   |      |       | 531  |       |       | 927  |      |
| Travel Time (s)     |       | 20.9 |      |       | 19.0  |      |       | 10.3 |       |       | 18.1 |      |

Intersection Summary

Area Type: Other

Timings  
102: Beauregard St & Roanoke Ave

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 10    | 35    | 5     | 20    | 115   | 600   | 275   | 815   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 7     | 4     | 3     | 8     | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 2     |       | 6     |       |
| Detector Phase       | 7     | 4     | 3     | 8     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 9.0   | 27.0  | 9.0   | 27.0  | 9.0   | 27.0  | 9.0   | 27.0  |
| Total Split (s)      | 9.0   | 28.0  | 9.0   | 28.0  | 16.0  | 42.0  | 31.0  | 57.0  |
| Total Split (%)      | 8.2%  | 25.5% | 8.2%  | 25.5% | 14.5% | 38.2% | 28.2% | 51.8% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.0   | 6.0   | 5.0   | 6.0   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  | 9.4   | 8.1   | 9.4   | 8.1   | 81.7  | 73.5  | 89.7  | 78.2  |
| Actuated g/C Ratio   | 0.09  | 0.07  | 0.09  | 0.07  | 0.74  | 0.67  | 0.82  | 0.71  |
| v/c Ratio            | 0.09  | 0.44  | 0.04  | 0.46  | 0.25  | 0.29  | 0.46  | 0.36  |
| Control Delay        | 42.3  | 37.7  | 53.8  | 36.2  | 4.8   | 8.8   | 8.6   | 11.7  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 42.3  | 37.7  | 53.8  | 36.2  | 4.8   | 8.8   | 8.6   | 11.7  |
| LOS                  | D     | D     | D     | D     | A     | A     | A     | B     |
| Approach Delay       | 38.3  |       | 37.2  |       | 8.2   |       | 10.9  |       |
| Approach LOS         | D     |       | D     |       | A     |       | B     |       |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 45 (41%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.46  
 Intersection Signal Delay: 12.0  
 Intersection LOS: B  
 Intersection Capacity Utilization 54.2%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 102: Beauregard St & Roanoke Ave



Phasings  
102: Beauregard St & Roanoke Ave

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBL  | EBT   | WBL  | WBT   | NBL   | NBT   | SBL   | SBT   |  |
|-------------------------|------|-------|------|-------|-------|-------|-------|-------|--|
| Protected Phases        | 7    | 4     | 3    | 8     | 5     | 2     | 1     | 6     |  |
| Permitted Phases        | 4    |       | 8    |       | 2     |       | 6     |       |  |
| Minimum Initial (s)     | 4.0  | 4.0   | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |  |
| Minimum Split (s)       | 9.0  | 27.0  | 9.0  | 27.0  | 9.0   | 27.0  | 9.0   | 27.0  |  |
| Total Split (s)         | 9.0  | 28.0  | 9.0  | 28.0  | 16.0  | 42.0  | 31.0  | 57.0  |  |
| Total Split (%)         | 8.2% | 25.5% | 8.2% | 25.5% | 14.5% | 38.2% | 28.2% | 51.8% |  |
| Maximum Green (s)       | 4.0  | 22.0  | 4.0  | 22.0  | 11.0  | 36.0  | 26.0  | 51.0  |  |
| Yellow Time (s)         | 3.0  | 4.0   | 3.0  | 4.0   | 3.0   | 4.0   | 3.0   | 4.0   |  |
| All-Red Time (s)        | 2.0  | 2.0   | 2.0  | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |  |
| Lead/Lag                | Lead | Lag   | Lead | Lag   | Lead  | Lag   | Lead  | Lag   |  |
| Lead-Lag Optimize?      |      |       |      |       |       |       |       |       |  |
| Vehicle Extension (s)   | 3.0  | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |  |
| Minimum Gap (s)         | 3.0  | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |  |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Recall Mode             | None | None  | None | None  | None  | C-Max | None  | C-Max |  |
| Walk Time (s)           |      | 7.0   |      | 7.0   |       | 7.0   |       | 7.0   |  |
| Flash Dont Walk (s)     |      | 14.0  |      | 14.0  |       | 14.0  |       | 14.0  |  |
| Pedestrian Calls (#/hr) |      | 0     |      | 0     |       | 0     |       | 0     |  |
| 90th %ile Green (s)     | 4.0  | 11.7  | 4.0  | 11.7  | 9.6   | 53.1  | 19.2  | 62.7  |  |
| 90th %ile Term Code     | Max  | Gap   | Max  | Hold  | Gap   | Coord | Gap   | Coord |  |
| 70th %ile Green (s)     | 0.0  | 9.4   | 0.0  | 9.4   | 7.4   | 68.9  | 14.7  | 76.2  |  |
| 70th %ile Term Code     | Skip | Gap   | Skip | Hold  | Gap   | Coord | Gap   | Coord |  |
| 50th %ile Green (s)     | 0.0  | 7.8   | 0.0  | 7.8   | 6.9   | 74.0  | 11.2  | 78.3  |  |
| 50th %ile Term Code     | Skip | Gap   | Skip | Hold  | Gap   | Coord | Gap   | Coord |  |
| 30th %ile Green (s)     | 0.0  | 6.3   | 0.0  | 6.3   | 6.4   | 78.5  | 8.2   | 80.3  |  |
| 30th %ile Term Code     | Skip | Gap   | Skip | Hold  | Gap   | Coord | Gap   | Coord |  |
| 10th %ile Green (s)     | 0.0  | 0.0   | 0.0  | 0.0   | 5.6   | 93.0  | 6.0   | 93.4  |  |
| 10th %ile Term Code     | Skip | Skip  | Skip | Skip  | Gap   | Coord | Gap   | Coord |  |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 45 (41%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
105: Bradford Ct/Sheffield Ct & New Sanger Ave/Sanger Ave

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT   | EBR  | WBL  | WBT   | WBR   | NBL   | NBT   | NBR  | SBL   | SBT  | SBR   |
|---------------------|-------|-------|------|------|-------|-------|-------|-------|------|-------|------|-------|
| Lane Configurations |       |       |      |      |       |       |       |       |      |       |      |       |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12   | 12   | 12    | 12    | 12    | 12    | 12   | 12    | 12   | 12    |
| Grade (%)           |       | 0%    |      |      | 0%    |       |       | 0%    |      |       | 0%   |       |
| Storage Length (ft) | 100   |       | 0    | 100  |       | 0     | 100   |       | 0    | 200   |      | 0     |
| Storage Lanes       | 1     |       | 0    | 0    |       | 1     | 1     |       | 0    | 1     |      | 0     |
| Taper Length (ft)   | 50    |       |      | 50   |       |       | 50    |       |      | 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     |       |       |      |      |       |       |       |       |      |       |      |       |
| Frt                 |       | 0.986 |      |      |       | 0.850 |       | 0.852 |      |       |      | 0.900 |
| Flt Protected       | 0.950 |       |      |      | 0.961 |       | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (prot)   | 1770  | 1837  | 0    | 0    | 1790  | 1583  | 1770  | 1587  | 0    | 1770  | 1676 | 0     |
| Flt Permitted       | 0.294 |       |      |      | 0.688 |       | 0.736 |       |      | 0.155 |      |       |
| Satd. Flow (perm)   | 548   | 1837  | 0    | 0    | 1282  | 1583  | 1371  | 1587  | 0    | 289   | 1676 | 0     |
| Right Turn on Red   |       |       | Yes  |      |       | Yes   |       |       | Yes  |       |      | Yes   |
| Satd. Flow (RTOR)   |       | 6     |      |      |       | 81    |       | 333   |      | 22    |      |       |
| Link Speed (mph)    |       | 25    |      |      | 25    |       |       | 25    |      | 30    |      |       |
| Link Distance (ft)  |       | 940   |      |      | 417   |       |       | 667   |      | 748   |      |       |
| Travel Time (s)     |       | 25.6  |      |      | 11.4  |       |       | 18.2  |      | 17.0  |      |       |

Intersection Summary

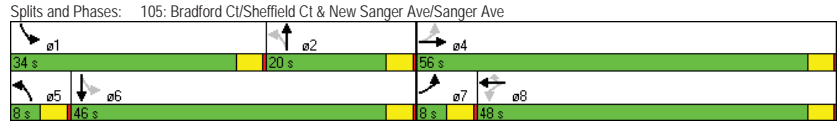
Area Type: Other

**Timings** 2035 Market with Traffic Mitigation  
PM PEAK  
105: Bradford Ct/Sheffield Ct & New Sanger Ave/Sanger Ave

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     |
| Volume (vph)         | 20    | 100   | 315   | 75    | 75    | 5     | 5     | 445   | 10    |
| Turn Type            | pm+pt | NA    | Perm  | NA    | Perm  | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 7     | 4     |       | 8     |       | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 8     | 2     |       | 6     |       |
| Detector Phase       | 7     | 4     | 8     | 8     | 8     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 8.0   | 20.0  | 20.0  | 20.0  | 20.0  | 8.0   | 20.0  | 8.0   | 20.0  |
| Total Split (s)      | 8.0   | 56.0  | 48.0  | 48.0  | 48.0  | 8.0   | 20.0  | 34.0  | 46.0  |
| Total Split (%)      | 7.3%  | 50.9% | 43.6% | 43.6% | 43.6% | 7.3%  | 18.2% | 30.9% | 41.8% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   | 0.5   |
| 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   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  |       | Lag   | Lag   | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Max | C-Max | C-Max | C-Max | None  | Max   | None  | Max   |
| Act Effct Green (s)  | 52.0  | 52.0  |       | 48.8  | 48.8  | 22.6  | 18.6  | 50.0  | 48.4  |
| Actuated g/C Ratio   | 0.47  | 0.47  |       | 0.44  | 0.44  | 0.21  | 0.17  | 0.45  | 0.44  |
| v/c Ratio            | 0.07  | 0.14  |       | 0.74  | 0.11  | 0.02  | 0.62  | 0.95  | 0.04  |
| Control Delay        | 6.9   | 6.7   |       | 36.0  | 5.0   | 25.6  | 22.3  | 57.9  | 7.2   |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 6.9   | 6.7   |       | 36.0  | 5.0   | 25.6  | 22.3  | 57.9  | 7.2   |
| LOS                  | A     | A     |       | D     | A     | C     | C     | E     | A     |
| Approach Delay       |       | 6.7   |       | 31.0  |       |       | 22.4  |       | 54.6  |
| Approach LOS         |       | A     |       | C     |       |       | C     |       | D     |

**Intersection Summary**

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 77 (70%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.95  
 Intersection Signal Delay: 34.8  
 Intersection LOS: C  
 Intersection Capacity Utilization 82.2%  
 ICU Level of Service E  
 Analysis Period (min) 15



**Phasings** 2035 Market with Traffic Mitigation  
PM PEAK  
105: Bradford Ct/Sheffield Ct & New Sanger Ave/Sanger Ave

| Lane Group              | EBL  | EBT   | WBL   | WBT   | WBR   | NBL  | NBT   | SBL   | SBT   |
|-------------------------|------|-------|-------|-------|-------|------|-------|-------|-------|
| Protected Phases        | 7    | 4     |       | 8     |       | 5    | 2     | 1     | 6     |
| Permitted Phases        | 4    |       | 8     |       | 8     | 2    |       | 6     |       |
| Minimum Initial (s)     | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0  | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 8.0  | 20.0  | 20.0  | 20.0  | 20.0  | 8.0  | 20.0  | 8.0   | 20.0  |
| Total Split (s)         | 8.0  | 56.0  | 48.0  | 48.0  | 48.0  | 8.0  | 20.0  | 34.0  | 46.0  |
| Total Split (%)         | 7.3% | 50.9% | 43.6% | 43.6% | 43.6% | 7.3% | 18.2% | 30.9% | 41.8% |
| Maximum Green (s)       | 4.0  | 52.0  | 44.0  | 44.0  | 44.0  | 4.0  | 16.0  | 30.0  | 42.0  |
| Yellow Time (s)         | 3.5  | 3.5   | 3.5   | 3.5   | 3.5   | 3.5  | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)        | 0.5  | 0.5   | 0.5   | 0.5   | 0.5   | 0.5  | 0.5   | 0.5   | 0.5   |
| Lead/Lag                | Lead |       | Lag   | Lag   | Lag   | Lead | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |      |       |       |       |       |      |       |       |       |
| Vehicle Extension (s)   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | C-Max | C-Max | C-Max | C-Max | None | Max   | None  | Max   |
| Walk Time (s)           |      | 5.0   | 5.0   | 5.0   | 5.0   |      | 5.0   |       | 5.0   |
| 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     |
| 90th %ile Green (s)     | 4.0  | 52.0  | 44.0  | 44.0  | 44.0  | 4.0  | 16.0  | 30.0  | 42.0  |
| 90th %ile Term Code     | Max  | Coord | Coord | Coord | Coord | Max  | MaxR  | Max   | MaxR  |
| 70th %ile Green (s)     | 4.0  | 52.0  | 44.0  | 44.0  | 44.0  | 0.0  | 16.0  | 30.0  | 50.0  |
| 70th %ile Term Code     | Max  | Coord | Coord | Coord | Coord | Skip | MaxR  | Max   | MaxR  |
| 50th %ile Green (s)     | 0.0  | 52.0  | 52.0  | 52.0  | 52.0  | 0.0  | 16.0  | 30.0  | 50.0  |
| 50th %ile Term Code     | Skip | Coord | Coord | Coord | Coord | Skip | MaxR  | Max   | MaxR  |
| 30th %ile Green (s)     | 0.0  | 52.0  | 52.0  | 52.0  | 52.0  | 0.0  | 19.4  | 26.6  | 50.0  |
| 30th %ile Term Code     | Skip | Coord | Coord | Coord | Coord | Skip | MaxR  | Gap   | MaxR  |
| 10th %ile Green (s)     | 0.0  | 52.0  | 52.0  | 52.0  | 52.0  | 0.0  | 25.4  | 20.6  | 50.0  |
| 10th %ile Term Code     | Skip | Coord | Coord | Coord | Coord | Skip | MaxR  | Gap   | MaxR  |

**Intersection Summary**

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 77 (70%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
107: New JBG Street & Sanger Ave

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL  | EBT   | EBR  | WBL  | WBT   | WBR  | NBL   | NBT   | NBR   | SBL  | SBT   | SBR  |
|---------------------|------|-------|------|------|-------|------|-------|-------|-------|------|-------|------|
| Lane Configurations |      | ↔     |      |      | ↔     |      | ↔     | ↔     |       | ↔    | ↔     |      |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12   | 12   | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12   |
| Grade (%)           |      | 0%    |      |      | 0%    |      |       | 0%    |       |      | 0%    |      |
| Storage Length (ft) | 100  |       | 0    | 100  |       | 0    | 100   |       | 0     | 100  |       | 0    |
| Storage Lanes       | 0    |       | 0    | 0    |       | 0    | 1     |       | 0     | 1    |       | 0    |
| Taper Length (ft)   | 50   |       |      | 50   |       |      | 50    |       |       | 50   |       |      |
| Lane Util. Factor   | 0.95 | 0.95  | 0.95 | 0.95 | 0.95  | 0.95 | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 |
| Ped Bike Factor     |      |       |      |      |       |      |       |       |       |      |       |      |
| Frt                 |      | 0.988 |      |      | 0.976 |      |       | 0.850 |       |      | 0.850 |      |
| Flt Protected       |      | 0.996 |      |      | 0.992 |      | 0.950 |       | 0.950 |      |       |      |
| Satd. Flow (prot)   | 0    | 3483  | 0    | 0    | 3427  | 0    | 1770  | 1583  | 0     | 1770 | 1583  | 0    |
| Flt Permitted       |      | 0.996 |      |      | 0.992 |      | 0.950 |       | 0.950 |      |       |      |
| Satd. Flow (perm)   | 0    | 3483  | 0    | 0    | 3427  | 0    | 1770  | 1583  | 0     | 1770 | 1583  | 0    |
| Link Speed (mph)    |      | 25    |      |      | 25    |      | 25    |       | 25    |      | 25    |      |
| Link Distance (ft)  |      | 417   |      |      | 517   |      | 716   |       | 782   |      |       |      |
| Travel Time (s)     |      | 11.4  |      |      | 14.1  |      | 19.5  |       | 21.3  |      |       |      |

Intersection Summary

Area Type: Other

Lanes and Geometrics  
111: Van Dorn St & Library Ln Ext

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | WBL   | WBR   | NBT  | NBR   | SBL  | SBT  |
|---------------------|-------|-------|------|-------|------|------|
| Lane Configurations | ↔     | ↔     | ↑    | ↔     | ↔    | ↑    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12   | 12   |
| Grade (%)           | 0%    |       | 0%   |       |      | 0%   |
| Storage Length (ft) | 100   | 0     |      | 250   | 100  |      |
| Storage Lanes       | 1     | 1     |      | 1     | 1    |      |
| Taper Length (ft)   | 50    |       |      | 50    |      |      |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95 | 1.00  | 1.00 | 0.95 |
| Ped Bike Factor     |       |       |      |       |      |      |
| Frt                 |       | 0.850 |      | 0.850 |      |      |
| Flt Protected       | 0.950 |       |      | 0.950 |      |      |
| Satd. Flow (prot)   | 1770  | 1583  | 3539 | 1583  | 1770 | 3539 |
| Flt Permitted       | 0.950 |       |      | 0.405 |      |      |
| Satd. Flow (perm)   | 1770  | 1583  | 3539 | 1583  | 754  | 3539 |
| Right Turn on Red   |       | Yes   |      | Yes   |      |      |
| Satd. Flow (RTOR)   |       | 22    |      | 177   |      |      |
| Link Speed (mph)    | 35    |       | 35   |       | 35   |      |
| Link Distance (ft)  | 665   |       | 1898 |       | 652  |      |
| Travel Time (s)     | 13.0  |       | 37.0 |       | 12.7 |      |

Intersection Summary

Area Type: Other

**Timings**  
**111: Van Dorn St & Library Ln Ext**

2035 Market with Traffic Mitigation  
 PM PEAK

| Lane Group           | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↑     | ↔     | ↔     | ↑     |
| Volume (vph)         | 30    | 20    | 545   | 165   | 270   | 1360  |
| Turn Type            | NA    | Perm  | NA    | Perm  | pm+pt | NA    |
| Protected Phases     | 8     |       | 2     |       | 1     | 6     |
| Permitted Phases     |       | 8     |       | 2     | 6     |       |
| Detector Phase       | 8     | 8     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 21.0  | 21.0  | 22.0  | 22.0  | 9.0   | 22.0  |
| Total Split (s)      | 23.0  | 23.0  | 58.0  | 58.0  | 29.0  | 87.0  |
| Total Split (%)      | 20.9% | 20.9% | 52.7% | 52.7% | 26.4% | 79.1% |
| Yellow Time (s)      | 3.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.0   | 5.0   | 6.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       | Lag   | Lag   | Lead  |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |
| Recall Mode          | None  | None  | C-Max | C-Max | None  | C-Max |
| Act Effct Green (s)  | 7.5   | 7.5   | 82.4  | 82.4  | 96.9  | 98.3  |
| Actuated g/C Ratio   | 0.07  | 0.07  | 0.75  | 0.75  | 0.88  | 0.89  |
| v/c Ratio            | 0.26  | 0.17  | 0.22  | 0.14  | 0.39  | 0.46  |
| Control Delay        | 53.3  | 21.3  | 5.4   | 1.2   | 1.9   | 1.3   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.1   |
| Total Delay          | 53.3  | 21.3  | 5.4   | 1.2   | 1.9   | 1.4   |
| LOS                  | D     | C     | A     | A     | A     | A     |
| Approach Delay       | 40.3  |       | 4.4   |       |       | 1.5   |
| Approach LOS         | D     |       | A     |       |       | A     |

**Intersection Summary**

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 100 (91%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.46  
 Intersection Signal Delay: 3.2  
 Intersection LOS: A  
 Intersection Capacity Utilization 50.1%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 111: Van Dorn St & Library Ln Ext



**Phasings**  
**111: Van Dorn St & Library Ln Ext**

2035 Market with Traffic Mitigation  
 PM PEAK

| Lane Group              | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 8     |       | 2     |       | 1     | 6     |
| Permitted Phases        |       | 8     |       | 2     | 6     |       |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 21.0  | 21.0  | 22.0  | 22.0  | 9.0   | 22.0  |
| Total Split (s)         | 23.0  | 23.0  | 58.0  | 58.0  | 29.0  | 87.0  |
| Total Split (%)         | 20.9% | 20.9% | 52.7% | 52.7% | 26.4% | 79.1% |
| Maximum Green (s)       | 18.0  | 18.0  | 52.0  | 52.0  | 24.0  | 81.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       | Lag   | Lag   | Lead  |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | C-Max | C-Max | None  | C-Max |
| Walk Time (s)           | 5.0   | 5.0   | 5.0   | 5.0   |       | 5.0   |
| Flash Dont Walk (s)     | 11.0  | 11.0  | 11.0  | 11.0  |       | 11.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     |       | 0     |
| 90th %ile Green (s)     | 9.9   | 9.9   | 72.6  | 72.6  | 11.5  | 89.1  |
| 90th %ile Term Code     | Gap   | Gap   | Coord | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 8.4   | 8.4   | 75.8  | 75.8  | 9.8   | 90.6  |
| 70th %ile Term Code     | Gap   | Gap   | Coord | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 7.4   | 7.4   | 77.7  | 77.7  | 8.9   | 91.6  |
| 50th %ile Term Code     | Gap   | Gap   | Coord | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 0.0   | 0.0   | 92.8  | 92.8  | 6.2   | 104.0 |
| 30th %ile Term Code     | Skip  | Skip  | Coord | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   | 93.0  | 93.0  | 6.0   | 104.0 |
| 10th %ile Term Code     | Skip  | Skip  | Coord | Coord | Gap   | Coord |

**Intersection Summary**

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 100 (91%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
114: Kenmore Ave & Seminary Rd

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL  | EBT   | EBR  | WBL  | WBT   | WBR  | NBL  | NBT  | NBR   | SBL  | SBT  | SBR   |
|---------------------|------|-------|------|------|-------|------|------|------|-------|------|------|-------|
| Lane Configurations |      | ↑↑↑   |      |      | ↑↑↑   |      |      |      | ↑     |      |      | ↑     |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12   | 12    | 12   | 12   | 12    |
| Grade (%)           |      | 0%    |      |      | 0%    |      |      | 0%   |       |      | 0%   |       |
| Storage Length (ft) | 0    |       | 0    | 0    |       | 0    | 0    |      | 0     | 0    |      | 0     |
| Storage Lanes       | 0    |       | 0    | 0    |       | 0    | 0    |      | 1     | 0    |      | 1     |
| Taper Length (ft)   | 50   |       |      | 50   |       |      | 50   |      |       | 50   |      |       |
| Lane Util. Factor   | 1.00 | 0.91  | 0.91 | 1.00 | 0.91  | 0.91 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  |
| Ped Bike Factor     |      |       |      |      |       |      |      |      |       |      |      |       |
| Frt                 |      | 0.976 |      |      | 0.991 |      |      |      | 0.865 |      |      | 0.865 |
| Flt Protected       |      |       |      |      |       |      |      |      |       |      |      |       |
| Satd. Flow (prot)   | 0    | 4963  | 0    | 0    | 5040  | 0    | 0    | 0    | 1611  | 0    | 0    | 1611  |
| Flt Permitted       |      |       |      |      |       |      |      |      |       |      |      |       |
| Satd. Flow (perm)   | 0    | 4963  | 0    | 0    | 5040  | 0    | 0    | 0    | 1611  | 0    | 0    | 1611  |
| Link Speed (mph)    |      | 35    |      |      | 35    |      |      | 25   |       |      | 25   |       |
| Link Distance (ft)  |      | 195   |      |      | 277   |      |      | 600  |       |      | 463  |       |
| Travel Time (s)     |      | 3.8   |      |      | 5.4   |      |      | 16.4 |       |      | 12.6 |       |

**Intersection Summary**  
Area Type: Other

Lanes and Geometrics  
119: South HOV Ramp & Seminary Rd

2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBT   | EBR  | WBL  | WBT   | NBL  | NBR  |
|---------------------|-------|------|------|-------|------|------|
| Lane Configurations | ↑↑    |      |      | ↑↑    | ↑↑   | ↑    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12   | 12   |
| Grade (%)           | 0%    |      |      | 0%    | 0%   |      |
| Storage Length (ft) |       | 0    | 0    |       | 0    | 0    |
| Storage Lanes       |       | 0    | 0    |       | 1    | 0    |
| Taper Length (ft)   |       |      | 50   |       | 50   |      |
| Lane Util. Factor   | 0.95  | 0.95 | 0.95 | 0.95  | 1.00 | 1.00 |
| Ped Bike Factor     |       |      |      |       |      |      |
| Frt                 | 0.921 |      |      |       |      |      |
| Flt Protected       |       |      |      | 0.991 |      |      |
| Satd. Flow (prot)   | 3260  | 0    | 0    | 3507  | 1863 | 0    |
| Flt Permitted       |       |      |      | 0.488 |      |      |
| Satd. Flow (perm)   | 3260  | 0    | 0    | 1727  | 1863 | 0    |
| Right Turn on Red   |       | Yes  |      |       |      | Yes  |
| Satd. Flow (RTOR)   | 830   |      |      |       |      |      |
| Link Speed (mph)    | 35    |      |      | 35    | 30   |      |
| Link Distance (ft)  | 818   |      |      | 409   | 640  |      |
| Travel Time (s)     | 15.9  |      |      | 8.0   | 14.5 |      |

**Intersection Summary**  
Area Type: Other



Timings  
119: South HOV Ramp & Seminary Rd

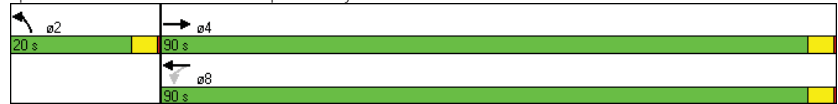
2035 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBT   | WBL   | WBT    | ø2   |
|----------------------|-------|-------|--------|------|
| Lane Configurations  | ↑↑    |       | ↑↑     |      |
| Volume (vph)         | 775   | 170   | 755    |      |
| Turn Type            | NA    | Perm  | NA     |      |
| Protected Phases     | 4     |       | 8      | 2    |
| Permitted Phases     |       | 8     |        |      |
| Detector Phase       | 4     | 8     | 8      |      |
| Switch Phase         |       |       |        |      |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0    | 4.0  |
| Minimum Split (s)    | 20.0  | 20.0  | 20.0   | 20.0 |
| Total Split (s)      | 90.0  | 90.0  | 90.0   | 20.0 |
| Total Split (%)      | 81.8% | 81.8% | 81.8%  | 18%  |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5    | 3.5  |
| All-Red Time (s)     | 0.5   | 0.5   | 0.5    | 0.5  |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0    |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0    |      |
| Lead/Lag             |       |       |        |      |
| Lead-Lag Optimize?   |       |       |        |      |
| Recall Mode          | C-Max | C-Max | C-Max  | Max  |
| Act Effct Green (s)  | 86.0  |       | 86.0   |      |
| Actuated g/C Ratio   | 0.78  |       | 0.78   |      |
| v/c Ratio            | 0.64  |       | 1.24dl |      |
| Control Delay        | 3.5   |       | 9.4    |      |
| Queue Delay          | 0.0   |       | 0.0    |      |
| Total Delay          | 3.5   |       | 9.4    |      |
| LOS                  | A     |       | A      |      |
| Approach Delay       | 3.5   |       | 9.4    |      |
| Approach LOS         | A     |       | A      |      |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 33 (30%), Referenced to phase 4:EBT and 8:WBT, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 5.6  
 Intersection LOS: A  
 Intersection Capacity Utilization 81.4%  
 ICU Level of Service D  
 Analysis Period (min) 15  
 dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 119: South HOV Ramp & Seminary Rd



Phasings  
119: South HOV Ramp & Seminary Rd

2035 Market with Traffic Mitigation  
PM PEAK


| Lane Group              | EBT   | WBL   | WBT   | ø2   |
|-------------------------|-------|-------|-------|------|
| Protected Phases        | 4     |       | 8     | 2    |
| Permitted Phases        |       | 8     |       |      |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0  |
| Minimum Split (s)       | 20.0  | 20.0  | 20.0  | 20.0 |
| Total Split (s)         | 90.0  | 90.0  | 90.0  | 20.0 |
| Total Split (%)         | 81.8% | 81.8% | 81.8% | 18%  |
| Maximum Green (s)       | 86.0  | 86.0  | 86.0  | 16.0 |
| Yellow Time (s)         | 3.5   | 3.5   | 3.5   | 3.5  |
| All-Red Time (s)        | 0.5   | 0.5   | 0.5   | 0.5  |
| Lead/Lag                |       |       |       |      |
| Lead-Lag Optimize?      |       |       |       |      |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0  |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0  |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0  |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0  |
| Recall Mode             | C-Max | C-Max | C-Max | Max  |
| Walk Time (s)           | 5.0   | 5.0   | 5.0   | 5.0  |
| Flash Dont Walk (s)     | 11.0  | 11.0  | 11.0  | 11.0 |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0    |
| 90th %ile Green (s)     | 86.0  | 86.0  | 86.0  | 16.0 |
| 90th %ile Term Code     | Coord | Coord | Coord | MaxR |
| 70th %ile Green (s)     | 86.0  | 86.0  | 86.0  | 16.0 |
| 70th %ile Term Code     | Coord | Coord | Coord | MaxR |
| 50th %ile Green (s)     | 86.0  | 86.0  | 86.0  | 16.0 |
| 50th %ile Term Code     | Coord | Coord | Coord | MaxR |
| 30th %ile Green (s)     | 86.0  | 86.0  | 86.0  | 16.0 |
| 30th %ile Term Code     | Coord | Coord | Coord | MaxR |
| 10th %ile Green (s)     | 86.0  | 86.0  | 86.0  | 16.0 |
| 10th %ile Term Code     | Coord | Coord | Coord | MaxR |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 33 (30%), Referenced to phase 4:EBT and 8:WBT, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
122: Seminary Rd (N) & North HOV Ramp

2035 Market with Traffic Mitigation  
PM PEAK




| Lane Group          | EBL   | EBT  | WBT  | WBR  | SBL  | SBR  |
|---------------------|-------|------|------|------|------|------|
| Lane Configurations |       |      | ↑↑↑  |      |      | ↑    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12   | 12   | 12   |
| Grade (%)           |       | 0%   | 0%   |      | 0%   |      |
| Storage Length (ft) | 0     |      |      | 0    | 0    | 0    |
| Storage Lanes       | 0     |      |      | 0    | 0    | 1    |
| Taper Length (ft)   | 50    |      |      |      | 50   |      |
| Lane Util. Factor   | 1.00  | 1.00 | 0.91 | 0.91 | 1.00 | 1.00 |
| Ped Bike Factor     | 0.865 |      |      |      |      |      |
| Flt Protected       |       |      |      |      |      |      |
| Satd. Flow (prot)   | 0     | 0    | 5085 | 0    | 0    | 1611 |
| Flt Permitted       |       |      |      |      |      |      |
| Satd. Flow (perm)   | 0     | 0    | 5085 | 0    | 0    | 1611 |
| Link Speed (mph)    |       | 35   | 35   |      | 30   |      |
| Link Distance (ft)  |       | 163  | 117  |      | 540  |      |
| Travel Time (s)     |       | 3.2  | 2.3  |      | 12.3 |      |

Intersection Summary

Area Type: Other

Lanes and Geometrics  
191: I-395 SB On-Ramp & Seminary Rd (S)

2035 Market with Traffic Mitigation  
PM PEAK



| Lane Group          | EBL         | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT   | SBR   |
|---------------------|-------------|------|------|------|------|------|------|------|------|------|-------|-------|
| Lane Configurations |             | ↑↑   | ↑    |      |      |      |      |      |      | ↑    | ↑↑    |       |
| Ideal Flow (vphpl)  | 1900        | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900  |
| Lane Width (ft)     | 12          | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12    | 12    |
| Grade (%)           |             | 0%   |      |      | 0%   |      |      | 0%   |      |      | 0%    |       |
| Storage Length (ft) | 0           |      | 0    | 0    |      | 0    | 0    |      | 0    | 0    | 0     | 0     |
| Storage Lanes       | 1           |      | 1    | 0    |      | 0    | 0    |      | 0    | 1    |       | 0     |
| Taper Length (ft)   | 50          |      |      | 50   |      |      |      |      | 50   |      | 50    |       |
| Lane Util. Factor   | 1.00        | 0.91 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.91  | 1.00  |
| Ped Bike Factor     | 0.958 0.850 |      |      |      |      |      |      |      |      |      |       |       |
| Flt Protected       |             |      |      |      |      |      |      |      |      |      | 0.950 | 0.965 |
| Satd. Flow (prot)   | 0           | 3248 | 1441 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 1610  | 3272  |
| Flt Permitted       |             |      |      |      |      |      |      |      |      |      | 0.950 | 0.965 |
| Satd. Flow (perm)   | 0           | 3248 | 1441 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 1610  | 3272  |
| Right Turn on Red   |             |      | Yes  |      |      | Yes  |      |      | Yes  | Yes  | Yes   | Yes   |
| Satd. Flow (RTOR)   |             | 35   | 362  |      |      |      |      |      |      |      | 84    | 84    |
| Link Speed (mph)    |             | 35   |      |      | 35   |      |      |      | 35   |      |       | 35    |
| Link Distance (ft)  |             | 371  |      |      | 307  |      |      |      | 340  |      |       | 280   |
| Travel Time (s)     |             | 7.2  |      |      | 6.0  |      |      |      | 6.6  |      |       | 5.5   |

Intersection Summary

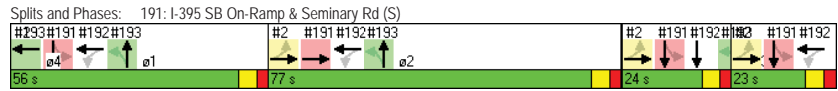
Area Type: Other

**Timings**  
**191: I-395 SB On-Ramp & Seminary Rd (S)**

**2035 Market with Traffic Mitigation**  
 PM PEAK

| Lane Group           | EBT   | EBR   | SBL   | SBT   | ø1   | ø3   | ø4   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  | ↔↔    | ↗     | ↘     | ↕     |      |      |      |
| Volume (vph)         | 725   | 730   | 690   | 130   |      |      |      |
| Turn Type            | NA    | Free  | Perm  | NA    |      |      |      |
| Protected Phases     | 2     |       | 1 3 4 | 1 3 4 | 1    | 3    | 4    |
| Permitted Phases     |       | Free  | 1 3 4 |       |      |      |      |
| Detector Phase       | 2     |       | 1 3 4 | 1 3 4 |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  | 10.0  |       |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    | 22.5  |       |       |       | 22.5 | 22.5 | 23.0 |
| Total Split (s)      | 77.0  | 0.0   | 103.0 | 103.0 | 56.0 | 24.0 | 23.0 |
| Total Split (%)      | 42.8% | 0.0%  | 57.2% | 57.2% | 31%  | 13%  | 13%  |
| Yellow Time (s)      | 4.0   |       |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     | 2.5   |       |       |       | 2.5  | 2.5  | 3.0  |
| Lost Time Adjust (s) | -2.5  | 0.0   | -2.5  | -2.5  |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             | Lag   |       |       |       | Lead | Lead | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          | Min   |       |       |       | Min  | Min  | Min  |
| Act Effct Green (s)  | 73.0  | 180.0 | 99.0  | 99.0  |      |      |      |
| Actuated g/C Ratio   | 0.41  | 1.00  | 0.55  | 0.55  |      |      |      |
| v/c Ratio            | 0.81  | 0.33  | 0.40  | 0.28  |      |      |      |
| Control Delay        | 51.7  | 0.6   | 1.9   | 32.1  |      |      |      |
| Queue Delay          | 0.0   | 0.0   | 287.9 | 0.0   |      |      |      |
| Total Delay          | 51.7  | 0.6   | 289.8 | 32.1  |      |      |      |
| LOS                  | D     | A     | F     | C     |      |      |      |
| Approach Delay       | 36.0  |       |       | 140.5 |      |      |      |
| Approach LOS         | D     |       |       | F     |      |      |      |

| Intersection Summary               |                        |
|------------------------------------|------------------------|
| Cycle Length:                      | 180                    |
| Actuated Cycle Length:             | 180                    |
| Natural Cycle:                     | 105                    |
| Control Type:                      | Actuated-Uncoordinated |
| Maximum v/c Ratio:                 | 0.81                   |
| Intersection Signal Delay:         | 73.7                   |
| Intersection LOS:                  | E                      |
| Intersection Capacity Utilization: | 67.2%                  |
| ICU Level of Service:              | C                      |
| Analysis Period (min):             | 15                     |



**Phasings**  
**191: I-395 SB On-Ramp & Seminary Rd (S)**

**2035 Market with Traffic Mitigation**  
 PM PEAK

| Lane Group              | EBT   | EBR  | SBL   | SBT   | ø1   | ø3   | ø4   |
|-------------------------|-------|------|-------|-------|------|------|------|
| Protected Phases        | 2     |      |       | 1 3 4 | 1    | 3    | 4    |
| Permitted Phases        |       | Free | 1 3 4 |       |      |      |      |
| Minimum Initial (s)     | 10.0  |      |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       | 22.5  |      |       |       | 22.5 | 22.5 | 23.0 |
| Total Split (s)         | 77.0  | 0.0  | 103.0 | 103.0 | 56.0 | 24.0 | 23.0 |
| Total Split (%)         | 42.8% | 0.0% | 57.2% | 57.2% | 31%  | 13%  | 13%  |
| Maximum Green (s)       | 70.5  |      |       |       | 49.5 | 17.5 | 16.0 |
| Yellow Time (s)         | 4.0   |      |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        | 2.5   |      |       |       | 2.5  | 2.5  | 3.0  |
| Lead/Lag                | Lag   |      |       |       | Lead | Lead | Lag  |
| Lead-Lag Optimize?      |       |      |       |       |      |      |      |
| Vehicle Extension (s)   | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Minimum Gap (s)         | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Recall Mode             | Min   |      |       |       | Min  | Min  | Min  |
| Walk Time (s)           |       |      |       |       |      |      |      |
| Flash Dont Walk (s)     |       |      |       |       |      |      |      |
| Pedestrian Calls (#/hr) |       |      |       |       |      |      |      |
| 90th %ile Green (s)     | 70.5  |      |       |       | 49.5 | 17.5 | 16.0 |
| 90th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 70th %ile Green (s)     | 70.5  |      |       |       | 49.5 | 17.5 | 16.0 |
| 70th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 50th %ile Green (s)     | 70.5  |      |       |       | 49.5 | 17.5 | 16.0 |
| 50th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 30th %ile Green (s)     | 70.5  |      |       |       | 49.5 | 17.5 | 16.0 |
| 30th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 10th %ile Green (s)     | 70.5  |      |       |       | 49.5 | 17.5 | 16.0 |
| 10th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |

| Intersection Summary      |                        |
|---------------------------|------------------------|
| Cycle Length:             | 180                    |
| Actuated Cycle Length:    | 180                    |
| Control Type:             | Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: | 180                    |
| 70th %ile Actuated Cycle: | 180                    |
| 50th %ile Actuated Cycle: | 180                    |
| 30th %ile Actuated Cycle: | 180                    |
| 10th %ile Actuated Cycle: | 180                    |

Lanes and Geometrics 2035 Market with Traffic Mitigation  
PM PEAK  
192: I-395 SB On-Ramp/I-395 SB Off-Ramp & Seminary Rd (N)

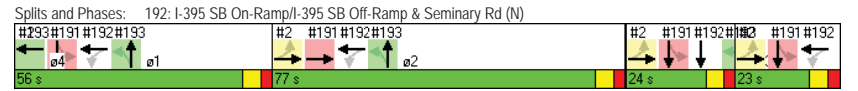
| Lane Group          | EBL  | EBT  | EBR  | WBL   | WBT   | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR   |
|---------------------|------|------|------|-------|-------|------|------|------|------|------|------|-------|
| Lane Configurations |      |      |      | ↔     | ↔     |      |      |      |      |      | ↔    | ↔     |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12   | 12   | 12    | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12    |
| Grade (%)           |      | 0%   |      |       | 0%    |      |      | 0%   |      |      | 0%   |       |
| Storage Length (ft) | 0    |      | 0    | 0     |       | 0    | 0    |      | 0    | 0    |      | 600   |
| Storage Lanes       | 0    |      | 0    | 1     |       | 0    | 0    |      | 0    | 0    |      | 1     |
| Taper Length (ft)   | 50   |      |      | 50    |       |      | 50   |      |      | 50   |      |       |
| Lane Util. Factor   | 1.00 | 1.00 | 1.00 | 0.91  | 0.91  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00  |
| Ped Bike Factor     |      |      |      |       |       |      |      |      |      |      |      |       |
| Frt                 |      |      |      |       |       |      |      |      |      |      |      | 0.850 |
| Flt Protected       |      |      |      | 0.950 | 0.987 |      |      |      |      |      |      |       |
| Satd. Flow (prot)   | 0    | 0    | 0    | 1610  | 3346  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583  |
| Flt Permitted       |      |      |      | 0.950 | 0.987 |      |      |      |      |      |      |       |
| Satd. Flow (perm)   | 0    | 0    | 0    | 1610  | 3346  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583  |
| Right Turn on Red   |      |      | Yes  | Yes   |       | Yes  |      |      | Yes  |      |      | Yes   |
| Satd. Flow (RTOR)   |      |      |      | 36    | 36    |      |      |      |      |      |      | 129   |
| Link Speed (mph)    |      | 30   |      |       | 35    |      |      | 35   |      |      | 35   |       |
| Link Distance (ft)  |      | 430  |      |       | 163   |      |      | 280  |      |      | 1465 |       |
| Travel Time (s)     |      | 9.8  |      |       | 3.2   |      |      | 5.5  |      |      | 28.5 |       |

**Intersection Summary**  
Area Type: Other

Timings 2035 Market with Traffic Mitigation  
PM PEAK  
192: I-395 SB On-Ramp/I-395 SB Off-Ramp & Seminary Rd (N)

| Lane Group           | WBL   | WBT   | SBT   | SBR   | ø1   | ø2   | ø4   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     |      |      |      |
| Volume (vph)         | 560   | 555   | 260   | 120   |      |      |      |
| Turn Type            | Perm  | NA    | NA    | Free  |      |      |      |
| Protected Phases     |       | 1 2 4 | 3     |       | 1    | 2    | 4    |
| Permitted Phases     | 1 2 4 |       |       | Free  |      |      |      |
| Detector Phase       | 1 2 4 | 1 2 4 | 3     |       |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  |       |       | 10.0  |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    |       |       | 22.5  |       | 22.5 | 22.5 | 23.0 |
| Total Split (s)      | 156.0 | 156.0 | 24.0  | 0.0   | 56.0 | 77.0 | 23.0 |
| Total Split (%)      | 86.7% | 86.7% | 13.3% | 0.0%  | 31%  | 43%  | 13%  |
| Yellow Time (s)      |       |       | 4.0   |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     |       |       | 2.5   |       | 2.5  | 2.5  | 3.0  |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | 0.0   |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             |       |       | Lead  |       | Lead | Lag  | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          |       |       | Min   |       | Min  | Min  | Min  |
| Act Effct Green (s)  | 152.0 | 152.0 | 20.0  | 180.0 |      |      |      |
| Actuated g/C Ratio   | 0.84  | 0.84  | 0.11  | 1.00  |      |      |      |
| v/c Ratio            | 0.29  | 0.29  | 0.71  | 0.08  |      |      |      |
| Control Delay        | 1.0   | 2.8   | 88.1  | 0.1   |      |      |      |
| Queue Delay          | 0.5   | 2.6   | 0.0   | 0.0   |      |      |      |
| Total Delay          | 1.5   | 5.4   | 88.1  | 0.1   |      |      |      |
| LOS                  | A     | A     | F     | A     |      |      |      |
| Approach Delay       |       | 4.1   | 60.3  |       |      |      |      |
| Approach LOS         |       | A     | E     |       |      |      |      |

**Intersection Summary**  
Cycle Length: 180  
Actuated Cycle Length: 180  
Natural Cycle: 105  
Control Type: Actuated-Uncoordinated  
Maximum v/c Ratio: 0.81  
Intersection Signal Delay: 18.4 Intersection LOS: B  
Intersection Capacity Utilization 42.8% ICU Level of Service A  
Analysis Period (min) 15



Phasings 2035 Market with Traffic Mitigation  
 192: I-395 SB On-Ramp/I-395 SB Off-Ramp & Seminary Rd (N) PM PEAK

| Lane Group              | WBL   | WBT   | SBT   | SBR  | ø1   | ø2   | ø4   |
|-------------------------|-------|-------|-------|------|------|------|------|
| Protected Phases        |       | 1 2 4 | 3     |      | 1    | 2    | 4    |
| Permitted Phases        | 1 2 4 |       |       | Free |      |      |      |
| Minimum Initial (s)     |       |       | 10.0  |      | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       |       |       | 22.5  |      | 22.5 | 22.5 | 23.0 |
| Total Split (s)         | 156.0 | 156.0 | 24.0  | 0.0  | 56.0 | 77.0 | 23.0 |
| Total Split (%)         | 86.7% | 86.7% | 13.3% | 0.0% | 31%  | 43%  | 13%  |
| Maximum Green (s)       |       |       | 17.5  |      | 49.5 | 70.5 | 16.0 |
| Yellow Time (s)         |       |       | 4.0   |      | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        |       |       | 2.5   |      | 2.5  | 2.5  | 3.0  |
| Lead/Lag                |       |       | Lead  |      | Lead | Lag  | Lag  |
| Lead-Lag Optimize?      |       |       |       |      |      |      |      |
| Vehicle Extension (s)   |       |       | 3.0   |      | 5.0  | 3.0  | 3.0  |
| Minimum Gap (s)         |       |       | 3.0   |      | 5.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  |       |       | 0.0   |      | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      |       |       | 0.0   |      | 0.0  | 0.0  | 0.0  |
| Recall Mode             |       |       | Min   |      | Min  | Min  | Min  |
| Walk Time (s)           |       |       |       |      |      |      |      |
| Flash Dont Walk (s)     |       |       |       |      |      |      |      |
| Pedestrian Calls (#/hr) |       |       |       |      |      |      |      |
| 90th %ile Green (s)     |       |       | 17.5  |      | 49.5 | 70.5 | 16.0 |
| 90th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |
| 70th %ile Green (s)     |       |       | 17.5  |      | 49.5 | 70.5 | 16.0 |
| 70th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |
| 50th %ile Green (s)     |       |       | 17.5  |      | 49.5 | 70.5 | 16.0 |
| 50th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |
| 30th %ile Green (s)     |       |       | 17.5  |      | 49.5 | 70.5 | 16.0 |
| 30th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |
| 10th %ile Green (s)     |       |       | 17.5  |      | 49.5 | 70.5 | 16.0 |
| 10th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |

**Intersection Summary**

Cycle Length: 180

Actuated Cycle Length: 180

Control Type: Actuated-Uncoordinated

90th %ile Actuated Cycle: 180

70th %ile Actuated Cycle: 180

50th %ile Actuated Cycle: 180

30th %ile Actuated Cycle: 180

10th %ile Actuated Cycle: 180

Lanes and Geometrics 2035 Market with Traffic Mitigation  
 193: I-395 NB Off-Ramp/I-395 NB On-Ramp & Seminary Rd (N) PM PEAK

| Lane Group          | EBL  | EBT  | EBR  | WBL  | WBT  | WBR   | NBL   | NBT   | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|-------|-------|-------|------|------|------|------|
| Lane Configurations |      |      |      |      | ↑↑   | ↑↑    | ↑↑    | ↑↑    |      |      |      |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900  | 1900  | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12   | 12   | 12   | 12    | 12    | 12    | 12   | 12   | 12   | 12   |
| Grade (%)           |      | 0%   |      |      | 0%   |       |       | 0%    |      |      | 0%   |      |
| Storage Length (ft) |      | 0    | 0    | 0    |      | 125   | 0     |       | 0    | 0    |      | 0    |
| Storage Lanes       |      | 0    | 0    | 0    |      | 1     | 1     |       | 0    | 0    |      | 0    |
| Taper Length (ft)   |      | 50   |      | 50   |      |       | 50    |       |      | 50   |      |      |
| Lane Util. Factor   | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00  | 0.91  | 0.91  | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      |      |      |      | 0.850 |       |       |      |      |      |      |
| Flt Protected       |      |      |      |      |      |       | 0.950 | 0.994 |      |      |      |      |
| Satd. Flow (prot)   | 0    | 0    | 0    | 0    | 3539 | 1583  | 1610  | 3370  | 0    | 0    | 0    | 0    |
| Flt Permitted       |      |      |      |      |      |       | 0.950 | 0.994 |      |      |      |      |
| Satd. Flow (perm)   | 0    | 0    | 0    | 0    | 3539 | 1583  | 1610  | 3370  | 0    | 0    | 0    | 0    |
| Right Turn on Red   |      |      | Yes  |      |      | Yes   | Yes   |       | Yes  |      |      | Yes  |
| Satd. Flow (RTOR)   |      |      |      |      |      | 412   | 192   | 37    |      |      |      |      |
| Link Speed (mph)    |      | 35   |      |      | 35   |       |       | 35    |      |      |      | 35   |
| Link Distance (ft)  |      | 117  |      |      | 302  |       |       | 272   |      |      |      | 567  |
| Travel Time (s)     |      | 2.3  |      |      | 5.9  |       |       | 5.3   |      |      |      | 11.0 |

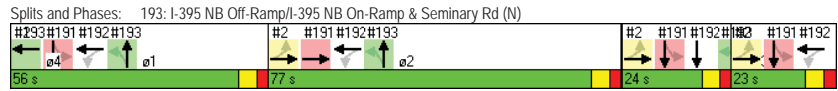
**Intersection Summary**

Area Type: Other

**Timings** 2035 Market with Traffic Mitigation  
PM PEAK  
193: I-395 NB Off-Ramp/I-395 NB On-Ramp & Seminary Rd (N)

| Lane Group           | WBT   | WBR   | NBL   | NBT   | ø1   | ø2   | ø3   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  | ↑↑    | ↑     | ↑     | ↑↑    |      |      |      |
| Volume (vph)         | 130   | 410   | 490   | 725   |      |      |      |
| Turn Type            | NA    | Free  | Perm  | NA    |      |      |      |
| Protected Phases     | 4     |       | 1 2 3 | 1 2 3 | 1    | 2    | 3    |
| Permitted Phases     |       | Free  | 1 2 3 |       |      |      |      |
| Detector Phase       | 4     |       | 1 2 3 | 1 2 3 |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  | 10.0  |       |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    | 23.0  |       |       |       | 22.5 | 22.5 | 22.5 |
| Total Split (s)      | 23.0  | 0.0   | 157.0 | 157.0 | 56.0 | 77.0 | 24.0 |
| Total Split (%)      | 12.8% | 0.0%  | 87.2% | 87.2% | 31%  | 43%  | 13%  |
| Yellow Time (s)      | 4.0   |       |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     | 3.0   |       |       |       | 2.5  | 2.5  | 2.5  |
| Lost Time Adjust (s) | -3.0  | 0.0   | -2.5  | -2.5  |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             | Lag   |       |       |       | Lead | Lag  | Lead |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          | Min   |       |       |       | Min  | Min  | Min  |
| Act Effct Green (s)  | 19.0  | 180.0 | 153.0 | 153.0 |      |      |      |
| Actuated g/C Ratio   | 0.11  | 1.00  | 0.85  | 0.85  |      |      |      |
| v/c Ratio            | 0.37  | 0.28  | 0.30  | 0.31  |      |      |      |
| Control Delay        | 78.2  | 0.4   | 9.4   | 3.4   |      |      |      |
| Queue Delay          | 0.0   | 0.0   | 4.5   | 0.3   |      |      |      |
| Total Delay          | 78.2  | 0.4   | 13.9  | 3.7   |      |      |      |
| LOS                  | E     | A     | B     | A     |      |      |      |
| Approach Delay       | 19.2  |       |       | 7.0   |      |      |      |
| Approach LOS         | B     |       |       | A     |      |      |      |

**Intersection Summary**  
 Cycle Length: 180  
 Actuated Cycle Length: 180  
 Natural Cycle: 105  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.81  
 Intersection Signal Delay: 10.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 68.0%  
 ICU Level of Service C  
 Analysis Period (min) 15



**Phasings** 2035 Market with Traffic Mitigation  
PM PEAK  
193: I-395 NB Off-Ramp/I-395 NB On-Ramp & Seminary Rd (N)

| Lane Group              | WBT   | WBR  | NBL   | NBT   | ø1   | ø2   | ø3   |
|-------------------------|-------|------|-------|-------|------|------|------|
| Protected Phases        | 4     |      |       | 1 2 3 | 1    | 2    | 3    |
| Permitted Phases        |       | Free | 1 2 3 |       |      |      |      |
| Minimum Initial (s)     | 10.0  |      |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       | 23.0  |      |       |       | 22.5 | 22.5 | 22.5 |
| Total Split (s)         | 23.0  | 0.0  | 157.0 | 157.0 | 56.0 | 77.0 | 24.0 |
| Total Split (%)         | 12.8% | 0.0% | 87.2% | 87.2% | 31%  | 43%  | 13%  |
| Maximum Green (s)       | 16.0  |      |       |       | 49.5 | 70.5 | 17.5 |
| Yellow Time (s)         | 4.0   |      |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        | 3.0   |      |       |       | 2.5  | 2.5  | 2.5  |
| Lead/Lag                | Lag   |      |       |       | Lead | Lag  | Lead |
| Lead-Lag Optimize?      |       |      |       |       |      |      |      |
| Vehicle Extension (s)   | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Minimum Gap (s)         | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Recall Mode             | Min   |      |       |       | Min  | Min  | Min  |
| Walk Time (s)           |       |      |       |       |      |      |      |
| Flash Dont Walk (s)     |       |      |       |       |      |      |      |
| Pedestrian Calls (#/hr) |       |      |       |       |      |      |      |
| 90th %ile Green (s)     | 16.0  |      |       |       | 49.5 | 70.5 | 17.5 |
| 90th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 70th %ile Green (s)     | 16.0  |      |       |       | 49.5 | 70.5 | 17.5 |
| 70th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 50th %ile Green (s)     | 16.0  |      |       |       | 49.5 | 70.5 | 17.5 |
| 50th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 30th %ile Green (s)     | 16.0  |      |       |       | 49.5 | 70.5 | 17.5 |
| 30th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 10th %ile Green (s)     | 16.0  |      |       |       | 49.5 | 70.5 | 17.5 |
| 10th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |

**Intersection Summary**  
 Cycle Length: 180  
 Actuated Cycle Length: 180  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 180  
 70th %ile Actuated Cycle: 180  
 50th %ile Actuated Cycle: 180  
 30th %ile Actuated Cycle: 180  
 10th %ile Actuated Cycle: 180

**F**

**Appendix F: Year 2020 Interim Market Demand Lanes, Timings & Phasing  
(Synchro)**

The following pages are analysis reports generated by Synchro.





Lanes and Geometrics  
 1: N Pickett St/N Pickett St/Fire Station & Seminary Rd  
 AM PEAK

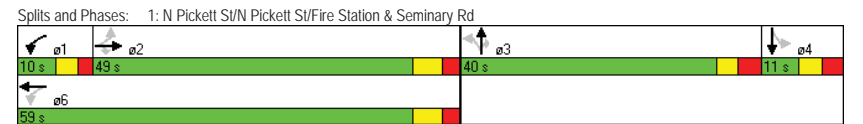
| Lane Group          | EBL  | EBT  | EBR   | WBL  | WBT   | WBR  | NBL  | NBT  | NBR   | SBL  | SBT  | SBR  |
|---------------------|------|------|-------|------|-------|------|------|------|-------|------|------|------|
| Lane Configurations |      | ↕↕   | ↕     |      | ↕↕    |      |      | ↕    | ↕     |      | ↕↕   |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900  | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12    | 12   | 12    | 12   | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           |      | 0%   |       |      | 0%    |      |      | 0%   |       |      | 0%   |      |
| Storage Length (ft) | 0    |      | 0     | 0    |       | 0    | 0    |      | 50    | 0    |      | 0    |
| Storage Lanes       | 0    |      | 1     | 0    |       | 0    | 0    |      | 1     | 0    |      | 0    |
| Taper Length (ft)   | 50   |      |       | 50   |       |      | 50   |      |       | 50   |      |      |
| Lane Util. Factor   | 0.95 | 0.95 | 1.00  | 0.95 | 0.95  | 0.95 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      |       |      |       |      |      |      | 0.98  |      |      |      |
| Frt                 |      |      | 0.850 |      |       |      |      |      | 0.850 |      |      |      |
| Flt Protected       |      |      |       |      | 0.997 |      |      |      | 0.950 |      |      |      |
| Satd. Flow (prot)   | 0    | 3539 | 1583  | 0    | 3529  | 0    | 0    | 1770 | 1583  | 0    | 1863 | 0    |
| Flt Permitted       |      |      |       |      | 0.689 |      |      |      | 0.950 |      |      |      |
| Satd. Flow (perm)   | 0    | 3539 | 1583  | 0    | 2439  | 0    | 0    | 1770 | 1556  | 0    | 1863 | 0    |
| Right Turn on Red   |      |      | Yes   |      |       | Yes  |      |      | Yes   |      |      | Yes  |
| Satd. Flow (RTOR)   |      |      | 124   |      |       |      |      |      | 122   |      |      |      |
| Link Speed (mph)    |      | 35   |       |      | 35    |      |      |      | 25    |      |      | 25   |
| Link Distance (ft)  |      | 317  |       |      | 744   |      |      |      | 657   |      |      | 269  |
| Travel Time (s)     |      | 6.2  |       |      | 14.5  |      |      |      | 17.9  |      |      | 7.3  |

Intersection Summary  
 Area Type: Other

Timings  
 1: N Pickett St/N Pickett St/Fire Station & Seminary Rd  
 AM PEAK

| Lane Group           | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | ø4   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations  | ↕↕    | ↕     |       | ↕↕    |       | ↕     | ↕     |      |
| Volume (vph)         | 740   | 115   | 85    | 1255  | 135   | 0     | 115   |      |
| Turn Type            | NA    | Perm  | pm+pt | NA    | Perm  | NA    | Perm  |      |
| Protected Phases     | 2     |       | 1     | 6     |       | 3     |       | 4    |
| Permitted Phases     |       | 2     | 6     |       | 3     |       | 3     |      |
| Detector Phase       | 2     | 2     | 1     | 6     | 3     | 3     | 3     |      |
| Switch Phase         |       |       |       |       |       |       |       |      |
| Minimum Initial (s)  | 10.0  | 10.0  | 5.0   | 10.0  | 7.0   | 7.0   | 7.0   | 5.0  |
| Minimum Split (s)    | 46.5  | 46.5  | 10.0  | 16.5  | 31.0  | 31.0  | 31.0  | 11.0 |
| Total Split (s)      | 49.0  | 49.0  | 10.0  | 59.0  | 40.0  | 40.0  | 40.0  | 11.0 |
| Total Split (%)      | 44.5% | 44.5% | 9.1%  | 53.6% | 36.4% | 36.4% | 36.4% | 10%  |
| Yellow Time (s)      | 4.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| All-Red Time (s)     | 2.5   | 2.5   | 2.0   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0  |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Total Lost Time (s)  | 6.5   | 6.5   | 5.0   | 6.5   | 6.0   | 6.0   | 6.0   | 6.0  |
| Lead/Lag             | Lag   | Lag   | Lead  |       | Lead  | Lead  | Lead  | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |      |
| Recall Mode          | C-Max | C-Max | Max   | C-Max | None  | None  | None  | None |
| Act Effct Green (s)  | 42.5  | 42.5  |       | 63.5  |       | 34.0  | 34.0  |      |
| Actuated g/C Ratio   | 0.39  | 0.39  |       | 0.58  |       | 0.31  | 0.31  |      |
| v/c Ratio            | 0.58  | 0.18  |       | 0.93  |       | 0.27  | 0.22  |      |
| Control Delay        | 24.5  | 4.6   |       | 25.0  |       | 30.2  | 6.3   |      |
| Queue Delay          | 1.5   | 0.0   |       | 0.0   |       | 0.0   | 0.0   |      |
| Total Delay          | 25.9  | 4.6   |       | 25.0  |       | 30.2  | 6.3   |      |
| LOS                  | C     | A     |       | C     |       | C     | A     |      |
| Approach Delay       | 23.1  |       |       | 25.0  |       | 19.2  |       |      |
| Approach LOS         | C     |       |       | C     |       | B     |       |      |

Intersection Summary  
 Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 87 (79%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.93  
 Intersection Signal Delay: 23.7  
 Intersection LOS: C  
 Intersection Capacity Utilization 82.6%  
 ICU Level of Service E  
 Analysis Period (min) 15



Phasings

2020 Market with Traffic Mitigation

1: N Pickett St/N Pickett St/Fire Station & Seminary Rd

AM PEAK

| Lane Group              | EBT   | EBR   | WBL  | WBT   | NBL   | NBT   | NBR   | ø4   |
|-------------------------|-------|-------|------|-------|-------|-------|-------|------|
| Protected Phases        | 2     |       | 1    | 6     |       | 3     |       | 4    |
| Permitted Phases        |       | 2     | 6    |       | 3     |       | 3     |      |
| Minimum Initial (s)     | 10.0  | 10.0  | 5.0  | 10.0  | 7.0   | 7.0   | 7.0   | 5.0  |
| Minimum Split (s)       | 46.5  | 46.5  | 10.0 | 16.5  | 31.0  | 31.0  | 31.0  | 11.0 |
| Total Split (s)         | 49.0  | 49.0  | 10.0 | 59.0  | 40.0  | 40.0  | 40.0  | 11.0 |
| Total Split (%)         | 44.5% | 44.5% | 9.1% | 53.6% | 36.4% | 36.4% | 36.4% | 10%  |
| Maximum Green (s)       | 42.5  | 42.5  | 5.0  | 52.5  | 34.0  | 34.0  | 34.0  | 5.0  |
| Yellow Time (s)         | 4.0   | 4.0   | 3.0  | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| All-Red Time (s)        | 2.5   | 2.5   | 2.0  | 2.5   | 3.0   | 3.0   | 3.0   | 3.0  |
| Lead/Lag                | Lag   | Lag   | Lead |       | Lead  | Lead  | Lead  | Lag  |
| Lead-Lag Optimize?      |       |       |      |       |       |       |       |      |
| Vehicle Extension (s)   | 4.0   | 4.0   | 4.0  | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| Minimum Gap (s)         | 4.0   | 4.0   | 4.0  | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Recall Mode             | C-Max | C-Max | Max  | C-Max | None  | None  | None  | None |
| Walk Time (s)           | 22.0  | 22.0  |      |       | 7.0   | 7.0   | 7.0   |      |
| Flash Dont Walk (s)     | 18.0  | 18.0  |      |       | 18.0  | 18.0  | 18.0  |      |
| Pedestrian Calls (#/hr) | 0     | 0     |      |       | 0     | 0     | 0     |      |
| 90th %ile Green (s)     | 42.5  | 42.5  | 16.0 | 63.5  | 34.0  | 34.0  | 34.0  | 0.0  |
| 90th %ile Term Code     | Coord | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |
| 70th %ile Green (s)     | 42.5  | 42.5  | 16.0 | 63.5  | 34.0  | 34.0  | 34.0  | 0.0  |
| 70th %ile Term Code     | Coord | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |
| 50th %ile Green (s)     | 42.5  | 42.5  | 16.0 | 63.5  | 34.0  | 34.0  | 34.0  | 0.0  |
| 50th %ile Term Code     | Coord | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |
| 30th %ile Green (s)     | 42.5  | 42.5  | 16.0 | 63.5  | 34.0  | 34.0  | 34.0  | 0.0  |
| 30th %ile Term Code     | Coord | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |
| 10th %ile Green (s)     | 42.5  | 42.5  | 16.0 | 63.5  | 34.0  | 34.0  | 34.0  | 0.0  |
| 10th %ile Term Code     | Coord | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 87 (79%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

2020 Market with Traffic Mitigation

2: I-395 NB Off-Ramp & Seminary Rd (S)

AM PEAK

| Lane Group          | EBL   | EBT   | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR   | SBL  | SBT  | SBR  |
|---------------------|-------|-------|------|------|------|------|------|------|-------|------|------|------|
| Lane Configurations |       |       |      |      |      |      |      |      |       |      |      |      |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           |       | 0%    |      |      | 0%   |      |      | 0%   |       |      | 0%   |      |
| Storage Length (ft) | 0     |       | 0    | 0    |      | 0    | 0    |      | 600   | 0    |      | 0    |
| Storage Lanes       | 1     |       | 0    | 0    |      | 0    | 0    |      | 1     | 0    |      | 0    |
| Taper Length (ft)   | 50    |       |      | 50   |      |      | 50   |      |       | 50   |      |      |
| Lane Util. Factor   | 0.91  | 0.91  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00  | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor     |       |       |      |      |      |      |      |      |       |      |      |      |
| Frt                 |       |       |      |      |      |      |      |      | 0.850 |      |      |      |
| Flt Protected       | 0.950 | 0.972 |      |      |      |      |      |      |       |      |      |      |
| Satd. Flow (prot)   | 1610  | 3295  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583  | 0    | 0    | 0    |
| Flt Permitted       | 0.950 | 0.972 |      |      |      |      |      |      |       |      |      |      |
| Satd. Flow (perm)   | 1610  | 3295  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583  | 0    | 0    | 0    |
| Right Turn on Red   | Yes   |       | Yes  |      |      | Yes  |      |      | Yes   |      |      | Yes  |
| Satd. Flow (RTOR)   | 19    | 19    |      |      |      |      |      |      | 134   |      |      |      |
| Link Speed (mph)    | 35    |       |      |      | 35   |      |      |      | 35    |      |      | 35   |
| Link Distance (ft)  | 307   |       |      |      | 322  |      |      |      | 1292  |      |      | 272  |
| Travel Time (s)     |       | 6.0   |      |      | 6.3  |      |      |      | 25.2  |      |      | 5.3  |

Intersection Summary

Area Type: Other

Timings

2020 Market with Traffic Mitigation  
AM PEAK

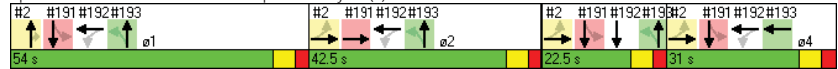
2: I-395 NB Off-Ramp & Seminary Rd (S)

| Lane Group           | EBL   | EBT   | NBT   | NBR   | ø2   | ø3   | ø4   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  |       |       |       |       |      |      |      |
| Volume (vph)         | 680   | 245   | 925   | 125   |      |      |      |
| Turn Type            | Perm  | NA    | NA    | Perm  |      |      |      |
| Protected Phases     |       | 2 3 4 | 1     |       | 2    | 3    | 4    |
| Permitted Phases     | 2 3 4 |       |       | 1     |      |      |      |
| Detector Phase       | 2 3 4 | 2 3 4 | 1     | 1     |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  |       |       | 10.0  | 10.0  | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    |       |       | 22.5  | 22.5  | 22.5 | 22.5 | 23.0 |
| Total Split (s)      | 96.0  | 96.0  | 54.0  | 54.0  | 42.5 | 22.5 | 31.0 |
| Total Split (%)      | 64.0% | 64.0% | 36.0% | 36.0% | 28%  | 15%  | 21%  |
| Yellow Time (s)      |       |       | 4.0   | 4.0   | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     |       |       | 2.5   | 2.5   | 2.5  | 2.5  | 3.0  |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | -2.5  |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             |       |       | Lead  | Lead  | Lag  | Lead | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          |       |       | Min   | Min   | Min  | Min  | Min  |
| Act Effct Green (s)  | 92.0  | 92.0  | 50.0  | 50.0  |      |      |      |
| Actuated g/C Ratio   | 0.61  | 0.61  | 0.33  | 0.33  |      |      |      |
| v/c Ratio            | 0.37  | 0.31  | 0.84  | 0.22  |      |      |      |
| Control Delay        | 0.9   | 4.7   | 54.2  | 6.2   |      |      |      |
| Queue Delay          | 4.4   | 1.0   | 0.0   | 0.0   |      |      |      |
| Total Delay          | 5.3   | 5.7   | 54.2  | 6.2   |      |      |      |
| LOS                  | A     | A     | D     | A     |      |      |      |
| Approach Delay       |       | 5.6   | 48.5  |       |      |      |      |
| Approach LOS         |       | A     | D     |       |      |      |      |

Intersection Summary

|   |
|---|
| Cycle Length: 150                       |
| Actuated Cycle Length: 150              |
| Natural Cycle: 115                      |
| Control Type: Actuated-Uncoordinated    |
| Maximum v/c Ratio: 1.02                 |
| Intersection Signal Delay: 28.4         |
| Intersection LOS: C                     |
| Intersection Capacity Utilization 57.7% |
| ICU Level of Service B                  |
| Analysis Period (min) 15                |

Splits and Phases: 2: I-395 NB Off-Ramp & Seminary Rd (S)



Phasings

2020 Market with Traffic Mitigation  
AM PEAK

2: I-395 NB Off-Ramp & Seminary Rd (S)

| Lane Group              | EBL   | EBT   | NBT   | NBR   | ø2   | ø3   | ø4   |
|-------------------------|-------|-------|-------|-------|------|------|------|
| Protected Phases        |       | 2 3 4 | 1     |       | 2    | 3    | 4    |
| Permitted Phases        | 2 3 4 |       |       | 1     |      |      |      |
| Minimum Initial (s)     |       |       | 10.0  | 10.0  | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       |       |       | 22.5  | 22.5  | 22.5 | 22.5 | 23.0 |
| Total Split (s)         | 96.0  | 96.0  | 54.0  | 54.0  | 42.5 | 22.5 | 31.0 |
| Total Split (%)         | 64.0% | 64.0% | 36.0% | 36.0% | 28%  | 15%  | 21%  |
| Maximum Green (s)       |       |       | 47.5  | 47.5  | 36.0 | 16.0 | 24.0 |
| Yellow Time (s)         |       |       | 4.0   | 4.0   | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        |       |       | 2.5   | 2.5   | 2.5  | 2.5  | 3.0  |
| Lead/Lag                |       |       | Lead  | Lead  | Lag  | Lead | Lag  |
| Lead-Lag Optimize?      |       |       |       |       |      |      |      |
| Vehicle Extension (s)   |       |       | 5.0   | 5.0   | 3.0  | 3.0  | 3.0  |
| Minimum Gap (s)         |       |       | 5.0   | 5.0   | 3.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  |       |       | 0.0   | 0.0   | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      |       |       | 0.0   | 0.0   | 0.0  | 0.0  | 0.0  |
| Recall Mode             |       |       | Min   | Min   | Min  | Min  | Min  |
| Walk Time (s)           |       |       |       |       |      |      |      |
| Flash Dont Walk (s)     |       |       |       |       |      |      |      |
| Pedestrian Calls (#/hr) |       |       |       |       |      |      |      |
| 90th %ile Green (s)     |       |       | 47.5  | 47.5  | 36.0 | 16.0 | 24.0 |
| 90th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 70th %ile Green (s)     |       |       | 47.5  | 47.5  | 36.0 | 16.0 | 24.0 |
| 70th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 50th %ile Green (s)     |       |       | 47.5  | 47.5  | 36.0 | 16.0 | 24.0 |
| 50th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 30th %ile Green (s)     |       |       | 47.5  | 47.5  | 36.0 | 16.0 | 24.0 |
| 30th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 10th %ile Green (s)     |       |       | 47.5  | 47.5  | 36.0 | 16.0 | 24.0 |
| 10th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |

Intersection Summary

|                                      |
|--------------------------------------|
| Cycle Length: 150                    |
| Actuated Cycle Length: 150           |
| Control Type: Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: 150        |
| 70th %ile Actuated Cycle: 150        |
| 50th %ile Actuated Cycle: 150        |
| 30th %ile Actuated Cycle: 150        |
| 10th %ile Actuated Cycle: 150        |

Lanes and Geometrics  
3: Seminary Rd (S)/Seminary Rd (N) & Seminary Rd

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL  | EBT  | EBR   | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR   |
|---------------------|------|------|-------|------|------|------|------|------|------|------|------|-------|
| Lane Configurations |      | ↑↑   | ↑↑    |      | ↑↑   |      |      |      |      |      |      | ↑↑    |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12   | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12    |
| Grade (%)           |      | 0%   |       |      | 0%   |      |      | 0%   |      |      | 0%   |       |
| Storage Length (ft) | 0    |      | 0     | 0    |      | 0    | 0    |      | 0    | 0    |      | 0     |
| Storage Lanes       | 0    |      | 2     | 0    |      | 0    | 0    |      | 0    | 0    |      | 2     |
| Taper Length (ft)   | 50   |      |       | 50   |      |      | 50   |      |      | 50   |      |       |
| Lane Util. Factor   | 1.00 | 0.95 | 0.88  | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88  |
| Ped Bike Factor     |      |      |       |      |      |      |      |      |      |      |      |       |
| Frt                 |      |      | 0.850 |      |      |      |      |      |      |      |      | 0.850 |
| Flt Protected       |      |      |       |      |      |      |      |      |      |      |      |       |
| Satd. Flow (prot)   | 0    | 3539 | 2787  | 0    | 3539 | 0    | 0    | 0    | 0    | 0    | 0    | 2787  |
| Flt Permitted       |      |      |       |      |      |      |      |      |      |      |      |       |
| Satd. Flow (perm)   | 0    | 3539 | 2787  | 0    | 3539 | 0    | 0    | 0    | 0    | 0    | 0    | 2787  |
| Link Speed (mph)    |      | 35   |       |      | 35   |      |      | 35   |      |      |      | 35    |
| Link Distance (ft)  |      | 387  |       |      | 824  |      |      | 331  |      |      |      | 287   |
| Travel Time (s)     |      | 7.5  |       |      | 16.1 |      |      | 6.4  |      |      |      | 5.6   |

**Intersection Summary**  
Area Type: Other

Lanes and Geometrics  
7: Beauregard St/S Walter Reed Dr & King St

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT  | SBR   |
|---------------------|-------|------|-------|-------|-------|------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↑↑    | ↑↑   | ↑     | ↑↑    | ↑↑    | ↑↑   |       |       |      |       | ↑↑   | ↑↑    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12   | 12    |
| Grade (%)           |       | 0%   |       |       | 0%    |      |       | 0%    |      |       | 0%   |       |
| Storage Length (ft) | 230   |      | 100   | 225   |       | 0    | 400   |       | 0    | 160   |      | 140   |
| Storage Lanes       | 2     |      | 1     | 2     |       | 0    | 2     |       | 0    | 1     |      | 1     |
| Taper Length (ft)   | 140   |      |       | 140   |       |      | 50    |       |      | 50    |      |       |
| Lane Util. Factor   | 0.97  | 0.95 | 1.00  | 0.97  | 0.95  | 0.95 | 0.97  | 0.95  | 0.95 | 1.00  | 0.95 | 1.00  |
| Ped Bike Factor     |       |      | 0.97  |       | 1.00  |      |       | 1.00  |      |       |      | 0.98  |
| Frt                 |       |      | 0.850 |       | 0.991 |      |       | 0.983 |      |       |      | 0.850 |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (prot)   | 3433  | 3539 | 1583  | 3433  | 3502  | 0    | 3433  | 3467  | 0    | 1770  | 3539 | 1583  |
| Flt Permitted       | 0.950 |      |       | 0.950 |       |      | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (perm)   | 3433  | 3539 | 1532  | 3433  | 3502  | 0    | 3433  | 3467  | 0    | 1770  | 3539 | 1552  |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |       |       | Yes  |       |      | Yes   |
| Satd. Flow (RTOR)   |       |      | 25    |       | 6     |      |       | 8     |      |       |      | 52    |
| Link Speed (mph)    |       | 35   |       |       | 35    |      |       | 35    |      |       |      | 35    |
| Link Distance (ft)  |       | 1357 |       |       | 1477  |      |       | 1439  |      |       |      | 1148  |
| Travel Time (s)     |       | 26.4 |       |       | 28.8  |      |       | 28.0  |      |       |      | 22.4  |

**Intersection Summary**  
Area Type: Other

Timings

7: Beauregard St/S Walter Reed Dr & King St

2020 Market with Traffic Mitigation

AM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL  | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |
| Volume (vph)         | 90    | 1300  | 85    | 85   | 1975  | 320   | 845   | 150   | 185   | 190   |
| Turn Type            | Prot  | NA    | Perm  | Prot | NA    | Prot  | NA    | Prot  | NA    | Perm  |
| Protected Phases     | 1     | 6     |       | 5    | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases     |       |       | 6     |      |       |       |       |       |       | 8     |
| Detector Phase       | 1     | 6     | 6     | 5    | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |      |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 10.0  | 10.0  | 4.0  | 10.0  | 6.5   | 7.0   | 3.5   | 7.0   | 7.0   |
| Minimum Split (s)    | 9.5   | 27.5  | 27.5  | 9.5  | 27.5  | 12.0  | 26.5  | 9.0   | 26.5  | 26.5  |
| Total Split (s)      | 10.0  | 97.0  | 97.0  | 15.0 | 102.0 | 23.0  | 50.0  | 18.0  | 45.0  | 45.0  |
| Total Split (%)      | 5.6%  | 53.9% | 53.9% | 8.3% | 56.7% | 12.8% | 27.8% | 10.0% | 25.0% | 25.0% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0  | 4.0   | 3.0   | 3.5   | 3.0   | 3.5   | 3.5   |
| All-Red Time (s)     | 2.5   | 2.5   | 2.5   | 2.5  | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | -5.0  | -5.0  | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.5   | 6.5   | 6.5   | 5.5  | 6.5   | 0.0   | 0.5   | 5.0   | 5.5   | 5.5   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |      |       |       |       |       |       |       |
| Recall Mode          | None  | Min   | Min   | None | Min   | None  | Min   | None  | Min   | Min   |
| Act Effct Green (s)  | 4.5   | 91.0  | 91.0  | 9.0  | 95.5  | 23.0  | 49.5  | 13.0  | 39.5  | 39.5  |
| Actuated g/C Ratio   | 0.02  | 0.51  | 0.51  | 0.05 | 0.53  | 0.13  | 0.28  | 0.07  | 0.22  | 0.22  |
| v/c Ratio            | 1.13  | 0.78  | 0.12  | 0.53 | 1.22  | 0.78  | 1.07  | 1.26  | 0.26  | 0.54  |
| Control Delay        | 207.8 | 40.3  | 17.4  | 95.0 | 139.8 | 89.5  | 109.5 | 225.9 | 59.1  | 51.5  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 207.8 | 40.3  | 17.4  | 95.0 | 139.8 | 89.5  | 109.5 | 225.9 | 59.1  | 51.5  |
| LOS                  | F     | D     | B     | F    | F     | F     | F     | F     | E     | D     |
| Approach Delay       |       | 49.2  |       |      | 138.1 |       | 104.5 |       | 104.0 |       |
| Approach LOS         |       | D     |       |      | F     |       | F     |       | F     |       |

Intersection Summary

|  |                        |
|--|------------------------|
| Cycle Length: 180                        |                        |
| Actuated Cycle Length: 180               |                        |
| Natural Cycle: 150                       |                        |
| Control Type: Actuated-Uncoordinated     |                        |
| Maximum v/c Ratio: 1.26                  |                        |
| Intersection Signal Delay: 103.0         | Intersection LOS: F    |
| Intersection Capacity Utilization 106.9% | ICU Level of Service G |
| Analysis Period (min) 15                 |                        |

Splits and Phases: 7: Beauregard St/S Walter Reed Dr & King St



Phasings

7: Beauregard St/S Walter Reed Dr & King St

2020 Market with Traffic Mitigation

AM PEAK

| Lane Group              | EBL  | EBT   | EBR   | WBL  | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|-------------------------|------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 1    | 6     |       | 5    | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases        |      |       | 6     |      |       |       |       |       |       | 8     |
| Minimum Initial (s)     | 4.0  | 10.0  | 10.0  | 4.0  | 10.0  | 6.5   | 7.0   | 3.5   | 7.0   | 7.0   |
| Minimum Split (s)       | 9.5  | 27.5  | 27.5  | 9.5  | 27.5  | 12.0  | 26.5  | 9.0   | 26.5  | 26.5  |
| Total Split (s)         | 10.0 | 97.0  | 97.0  | 15.0 | 102.0 | 23.0  | 50.0  | 18.0  | 45.0  | 45.0  |
| Total Split (%)         | 5.6% | 53.9% | 53.9% | 8.3% | 56.7% | 12.8% | 27.8% | 10.0% | 25.0% | 25.0% |
| Maximum Green (s)       | 4.5  | 90.5  | 90.5  | 9.5  | 95.5  | 18.0  | 44.5  | 13.0  | 39.5  | 39.5  |
| Yellow Time (s)         | 3.0  | 4.0   | 4.0   | 3.0  | 4.0   | 3.0   | 3.5   | 3.0   | 3.5   | 3.5   |
| All-Red Time (s)        | 2.5  | 2.5   | 2.5   | 2.5  | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead | Lag   | Lag   | Lead | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?      |      |       |       |      |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0  | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0  | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | Min   | Min   | None | Min   | None  | Min   | None  | Min   | Min   |
| Walk Time (s)           | 7.0  | 7.0   |       | 7.0  |       | 7.0   |       | 7.0   |       | 7.0   |
| Flash Dont Walk (s)     | 14.0 | 14.0  |       | 14.0 |       | 14.0  |       | 14.0  |       | 14.0  |
| Pedestrian Calls (#/hr) | 0    | 0     |       | 0    |       | 0     |       | 0     |       | 0     |
| 90th %ile Green (s)     | 4.5  | 90.5  | 90.5  | 9.5  | 95.5  | 18.0  | 44.5  | 13.0  | 39.5  | 39.5  |
| 90th %ile Term Code     | Max  | Max   | Max   | Max  | Max   | Max   | Max   | Max   | Hold  | Hold  |
| 70th %ile Green (s)     | 4.5  | 90.5  | 90.5  | 9.5  | 95.5  | 18.0  | 44.5  | 13.0  | 39.5  | 39.5  |
| 70th %ile Term Code     | Max  | Hold  | Hold  | Max  | Max   | Max   | Max   | Max   | Hold  | Hold  |
| 50th %ile Green (s)     | 4.5  | 90.5  | 90.5  | 9.5  | 95.5  | 18.0  | 44.5  | 13.0  | 39.5  | 39.5  |
| 50th %ile Term Code     | Max  | Hold  | Hold  | Max  | Max   | Max   | Max   | Max   | Hold  | Hold  |
| 30th %ile Green (s)     | 4.5  | 91.0  | 91.0  | 9.0  | 95.5  | 18.0  | 44.5  | 13.0  | 39.5  | 39.5  |
| 30th %ile Term Code     | Max  | Hold  | Hold  | Gap  | Max   | Max   | Max   | Max   | Hold  | Hold  |
| 10th %ile Green (s)     | 4.5  | 92.7  | 92.7  | 7.3  | 95.5  | 17.9  | 44.5  | 13.0  | 39.6  | 39.6  |
| 10th %ile Term Code     | Max  | Hold  | Hold  | Gap  | Max   | Gap   | Max   | Max   | Hold  | Hold  |

Intersection Summary

|                                      |
|--------------------------------------|
| Cycle Length: 180                    |
| Actuated Cycle Length: 180           |
| Control Type: Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: 180        |
| 70th %ile Actuated Cycle: 180        |
| 50th %ile Actuated Cycle: 180        |
| 30th %ile Actuated Cycle: 180        |
| 10th %ile Actuated Cycle: 180        |

Lanes and Geometrics  
9: Beauregard St & Braddock Rd

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT  | WBR   | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|-------|------|-------|------|-------|-------|------|-------|-------|-------|------|
| Lane Configurations | ↔     | ↕     | ↔    | ↔     | ↕    | ↕     | ↔     | ↕    | ↕     | ↔     | ↕     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           |       | -6%   |      |       | -4%  |       |       | -2%  |       |       | 2%    |      |
| Storage Length (ft) | 100   |       | 0    | 200   |      | 60    | 80    |      | 100   | 200   |       | 0    |
| Storage Lanes       | 1     |       | 0    | 1     |      | 1     | 1     |      | 1     | 1     |       | 0    |
| Taper Length (ft)   | 50    |       |      | 50    |      |       | 50    |      |       | 50    |       |      |
| Lane Util. Factor   | 1.00  | 0.95  | 0.95 | 1.00  | 0.95 | 1.00  | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 0.95 |
| Ped Bike Factor     |       |       |      |       |      |       |       |      |       |       | 0.99  |      |
| Frt                 |       | 0.944 |      |       |      | 0.850 |       |      | 0.850 |       | 0.968 |      |
| Flt Protected       | 0.950 |       |      | 0.950 |      |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (prot)   | 1823  | 3441  | 0    | 1805  | 3610 | 1615  | 1787  | 3575 | 1599  | 1752  | 3365  | 0    |
| Flt Permitted       | 0.706 |       |      | 0.644 |      |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (perm)   | 1355  | 3441  | 0    | 1224  | 3610 | 1615  | 1787  | 3575 | 1599  | 1752  | 3365  | 0    |
| Right Turn on Red   |       |       | Yes  |       |      | Yes   |       |      | Yes   |       |       | Yes  |
| Satd. Flow (RTOR)   |       | 16    |      |       |      | 178   |       |      | 77    |       | 43    |      |
| Link Speed (mph)    |       | 35    |      |       |      | 35    |       |      | 35    |       | 35    |      |
| Link Distance (ft)  |       | 755   |      |       | 1840 |       |       | 1125 |       |       | 1439  |      |
| Travel Time (s)     |       | 14.7  |      |       | 35.8 |       |       | 21.9 |       |       | 28.0  |      |

Intersection Summary

Area Type: Other

Timings  
9: Beauregard St & Braddock Rd

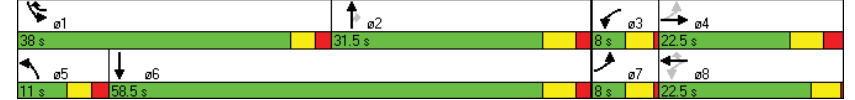
2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↕     | ↔     | ↕     | ↕     | ↔     | ↕     |
| Volume (vph)         | 5     | 25    | 160   | 70    | 640   | 35    | 630   | 105   | 170   | 145   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+ov | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 7     | 4     | 3     | 8     | 1     | 5     | 2     |       | 1     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 8     |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 3     | 8     | 1     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 7.0   | 4.0   | 4.0   | 6.0   | 6.0   | 10.0  | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)    | 8.0   | 22.5  | 8.0   | 20.0  | 11.0  | 11.0  | 26.0  | 26.0  | 11.0  | 26.0  |
| Total Split (s)      | 8.0   | 22.5  | 8.0   | 22.5  | 38.0  | 11.0  | 31.5  | 31.5  | 38.0  | 58.5  |
| Total Split (%)      | 8.0%  | 22.5% | 8.0%  | 22.5% | 38.0% | 11.0% | 31.5% | 31.5% | 38.0% | 58.5% |
| Yellow Time (s)      | 3.5   | 4.0   | 3.5   | 3.5   | 3.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 0.5   | 2.5   | 0.5   | 0.5   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | -2.5  | 0.0   | -1.0  | -2.0  | 0.0   | -1.0  | -2.0  |
| Total Lost Time (s)  | 1.5   | 4.0   | 1.5   | 1.5   | 5.0   | 4.0   | 4.0   | 6.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |
| Act Effct Green (s)  | 15.5  | 11.3  | 17.0  | 15.7  | 44.2  | 7.0   | 45.2  | 43.2  | 28.0  | 70.6  |
| Actuated g/C Ratio   | 0.16  | 0.11  | 0.17  | 0.16  | 0.44  | 0.07  | 0.45  | 0.43  | 0.28  | 0.71  |
| v/c Ratio            | 0.02  | 0.11  | 0.69  | 0.13  | 0.85  | 0.30  | 0.42  | 0.15  | 0.37  | 0.08  |
| Control Delay        | 28.6  | 27.4  | 50.6  | 34.5  | 27.7  | 61.4  | 17.2  | 5.2   | 30.5  | 5.7   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 28.6  | 27.4  | 50.6  | 34.5  | 27.7  | 61.4  | 17.2  | 5.2   | 30.5  | 5.7   |
| LOS                  | C     | C     | D     | C     | C     | E     | B     | A     | C     | A     |
| Approach Delay       |       | 27.5  |       | 32.4  |       |       | 17.6  |       |       | 17.6  |
| Approach LOS         |       | C     |       | C     |       |       | B     |       |       | B     |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 37 (37%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 24.1  
 Intersection LOS: C  
 Intersection Capacity Utilization 71.2%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 9: Beauregard St & Braddock Rd



Phasings

9: Beauregard St & Braddock Rd

2020 Market with Traffic Mitigation

AM PEAK

| Lane Group              | EBL  | EBT   | WBL  | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 7    | 4     | 3    | 8     | 1     | 5     | 2     |       | 1     | 6     |
| Permitted Phases        | 4    |       | 8    |       | 8     |       |       | 2     |       |       |
| Minimum Initial (s)     | 4.0  | 7.0   | 4.0  | 4.0   | 6.0   | 6.0   | 10.0  | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)       | 8.0  | 22.5  | 8.0  | 20.0  | 11.0  | 11.0  | 26.0  | 26.0  | 11.0  | 26.0  |
| Total Split (s)         | 8.0  | 22.5  | 8.0  | 22.5  | 38.0  | 11.0  | 31.5  | 31.5  | 38.0  | 58.5  |
| Total Split (%)         | 8.0% | 22.5% | 8.0% | 22.5% | 38.0% | 11.0% | 31.5% | 31.5% | 38.0% | 58.5% |
| Maximum Green (s)       | 4.0  | 16.0  | 4.0  | 18.5  | 33.0  | 6.0   | 25.5  | 25.5  | 33.0  | 52.5  |
| Yellow Time (s)         | 3.5  | 4.0   | 3.5  | 3.5   | 3.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 0.5  | 2.5   | 0.5  | 0.5   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead | Lag   | Lead | Lag   | Lead  | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |      |       |      |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0  | 2.0   | 3.0  | 3.0   | 3.0   | 3.0   | 0.2   | 0.2   | 3.0   | 0.2   |
| Minimum Gap (s)         | 3.0  | 2.0   | 3.0  | 3.0   | 3.0   | 3.0   | 0.2   | 0.2   | 3.0   | 0.2   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | None  | None | None  | None  | None  | C-Max | C-Max | None  | C-Max |
| Walk Time (s)           | 4.0  |       |      | 5.0   |       |       | 7.0   | 7.0   |       | 7.0   |
| Flash Dont Walk (s)     |      | 12.0  |      |       | 11.0  |       |       | 13.0  |       | 13.0  |
| Pedestrian Calls (#/hr) |      | 5     |      | 0     |       |       | 5     | 5     |       | 5     |
| 90th %ile Green (s)     | 4.0  | 16.0  | 4.0  | 18.5  | 33.0  | 6.0   | 25.5  | 25.5  | 33.0  | 52.5  |
| 90th %ile Term Code     | Max  | Ped   | Max  | Hold  | Max   | Max   | Coord | Coord | Max   | Coord |
| 70th %ile Green (s)     | 0.0  | 7.0   | 4.0  | 17.5  | 28.2  | 6.0   | 39.3  | 39.3  | 28.2  | 61.5  |
| 70th %ile Term Code     | Skip | Min   | Max  | Hold  | Gap   | Max   | Coord | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 0.0  | 7.0   | 4.0  | 17.5  | 24.6  | 6.0   | 42.9  | 42.9  | 24.6  | 61.5  |
| 50th %ile Term Code     | Skip | Min   | Max  | Hold  | Gap   | Max   | Coord | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 0.0  | 0.0   | 6.7  | 6.7   | 28.1  | 0.0   | 50.2  | 50.2  | 28.1  | 83.3  |
| 30th %ile Term Code     | Skip | Skip  | Hold | Gap   | Gap   | Skip  | Coord | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 0.0  | 0.0   | 5.7  | 5.7   | 21.3  | 0.0   | 58.0  | 58.0  | 21.3  | 84.3  |
| 10th %ile Term Code     | Skip | Skip  | Hold | Hold  | Gap   | Skip  | Coord | Coord | Gap   | Coord |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 37 (37%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

10: Beauregard St & Fillmore Ave

2020 Market with Traffic Mitigation

AM PEAK

| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |  |
|---------------------|------|-------|-------|------|-------|------|-------|-------|------|-------|-------|------|--|
| Lane Configurations |      | ↕     | ↕     |      | ↕     |      | ↕     | ↕     |      | ↕     | ↕     | ↕    |  |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |  |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   |  |
| Grade (%)           |      | -3%   |       |      | -3%   |      |       | -4%   |      |       | 3%    |      |  |
| Storage Length (ft) | 0    |       | 150   | 0    |       | 0    | 200   |       | 0    | 75    |       | 0    |  |
| Storage Lanes       | 0    |       | 1     | 0    |       | 0    | 1     |       | 0    | 1     |       | 0    |  |
| Taper Length (ft)   | 50   |       |       | 50   |       |      | 50    |       |      | 50    |       |      |  |
| 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     |      |       | 0.98  |      | 0.99  |      |       | 1.00  |      |       | 0.99  |      |  |
| Frt                 |      |       | 0.850 |      | 0.954 |      |       | 0.989 |      |       | 0.981 |      |  |
| Flt Protected       |      | 0.960 |       |      | 0.972 |      | 0.950 |       |      | 0.950 |       |      |  |
| Satd. Flow (prot)   | 0    | 1815  | 1607  | 0    | 1743  | 0    | 1805  | 3564  | 0    | 1743  | 3401  | 0    |  |
| Flt Permitted       |      | 0.764 |       |      | 0.823 |      | 0.950 |       |      | 0.950 |       |      |  |
| Satd. Flow (perm)   | 0    | 1444  | 1574  | 0    | 1476  | 0    | 1805  | 3564  | 0    | 1743  | 3401  | 0    |  |
| Right Turn on Red   |      |       | Yes   |      |       | Yes  |       |       | Yes  |       |       | Yes  |  |
| Satd. Flow (RTOR)   |      |       | 81    |      | 22    |      | 11    |       |      | 20    |       |      |  |
| Link Speed (mph)    |      | 25    |       |      | 25    |      | 35    |       |      | 35    |       |      |  |
| Link Distance (ft)  |      | 507   |       |      | 309   |      | 809   |       |      | 1125  |       |      |  |
| Travel Time (s)     |      | 13.8  |       |      | 8.4   |      | 15.8  |       |      | 21.9  |       |      |  |

Intersection Summary

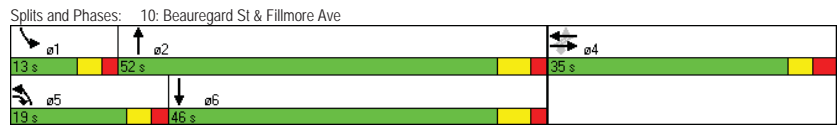
Area Type: Other

Timings  
10: Beauregard St & Fillmore Ave

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       | ↕     | ↕     |       | ↕     | ↕     | ↕     | ↕     | ↕     |
| Volume (vph)         | 25    | 5     | 75    | 35    | 5     | 80    | 725   | 10    | 270   |
| Turn Type            | Perm  | NA    | pm+ov | Perm  | NA    | Prot  | NA    | Prot  | NA    |
| Protected Phases     |       | 4     | 5     |       | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       |       | 4     |       |       |       |       |       |
| Detector Phase       | 4     | 4     | 5     | 4     | 4     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 14.0  | 14.0  | 6.0   | 14.0  | 14.0  | 6.0   | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)    | 33.0  | 33.0  | 11.0  | 33.0  | 33.0  | 11.0  | 16.0  | 11.0  | 16.0  |
| Total Split (s)      | 35.0  | 35.0  | 19.0  | 35.0  | 35.0  | 19.0  | 52.0  | 13.0  | 46.0  |
| Total Split (%)      | 35.0% | 35.0% | 19.0% | 35.0% | 35.0% | 19.0% | 52.0% | 13.0% | 46.0% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.0  | -2.0  | -1.0  | -2.0  | -2.0  | -1.0  | -2.0  | -1.0  | -2.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             |       |       | Lead  |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |       |
| Act Effct Green (s)  | 18.6  | 25.8  |       | 18.6  | 10.4  | 75.9  | 7.1   | 63.0  |       |
| Actuated g/C Ratio   | 0.19  | 0.26  |       | 0.19  | 0.10  | 0.76  | 0.07  | 0.63  |       |
| v/c Ratio            | 0.12  | 0.17  |       | 0.22  | 0.46  | 0.31  | 0.09  | 0.15  |       |
| Control Delay        | 32.9  | 5.0   |       | 25.0  | 49.5  | 6.7   | 53.7  | 6.5   |       |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Total Delay          | 32.9  | 5.0   |       | 25.0  | 49.5  | 6.7   | 53.7  | 6.5   |       |
| LOS                  | C     | A     |       | C     | D     | A     | D     | A     |       |
| Approach Delay       | 12.9  |       |       | 25.1  |       | 10.7  |       | 8.0   |       |
| Approach LOS         | B     |       |       | C     |       | B     |       | A     |       |

**Intersection Summary**  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 13 (13%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.46  
 Intersection Signal Delay: 10.9  
 Intersection LOS: B  
 Intersection Capacity Utilization 51.0%  
 ICU Level of Service A  
 Analysis Period (min) 15



Phasings  
10: Beauregard St & Fillmore Ave

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 4     | 5     |       | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases        | 4     |       |       | 4     |       |       |       |       |       |
| Minimum Initial (s)     | 14.0  | 14.0  | 6.0   | 14.0  | 14.0  | 6.0   | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)       | 33.0  | 33.0  | 11.0  | 33.0  | 33.0  | 11.0  | 16.0  | 11.0  | 16.0  |
| Total Split (s)         | 35.0  | 35.0  | 19.0  | 35.0  | 35.0  | 19.0  | 52.0  | 13.0  | 46.0  |
| Total Split (%)         | 35.0% | 35.0% | 19.0% | 35.0% | 35.0% | 19.0% | 52.0% | 13.0% | 46.0% |
| Maximum Green (s)       | 29.0  | 29.0  | 14.0  | 29.0  | 29.0  | 14.0  | 46.0  | 8.0   | 40.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       | Lead  |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.2   | 2.0   | 0.2   |
| Minimum Gap (s)         | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.2   | 2.0   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Walk Time (s)           | 4.0   | 4.0   |       | 4.0   | 4.0   |       |       |       |       |
| Flash Dont Walk (s)     | 23.0  | 23.0  |       | 23.0  | 23.0  |       |       |       |       |
| Pedestrian Calls (#/hr) | 5     | 5     |       | 5     | 5     |       |       |       |       |
| 90th %ile Green (s)     | 27.0  | 27.0  | 13.1  | 27.0  | 27.0  | 13.1  | 49.4  | 6.6   | 42.9  |
| 90th %ile Term Code     | Ped   | Ped   | Gap   | Ped   | Ped   | Gap   | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 14.0  | 14.0  | 10.8  | 14.0  | 14.0  | 10.8  | 74.0  | 0.0   | 58.2  |
| 70th %ile Term Code     | Min   | Min   | Gap   | Min   | Min   | Gap   | Coord | Skip  | Coord |
| 50th %ile Green (s)     | 14.0  | 14.0  | 9.2   | 14.0  | 14.0  | 9.2   | 74.0  | 0.0   | 59.8  |
| 50th %ile Term Code     | Min   | Min   | Gap   | Min   | Min   | Gap   | Coord | Skip  | Coord |
| 30th %ile Green (s)     | 14.0  | 14.0  | 7.7   | 14.0  | 14.0  | 7.7   | 74.0  | 0.0   | 61.3  |
| 30th %ile Term Code     | Min   | Min   | Gap   | Min   | Min   | Gap   | Coord | Skip  | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   | 6.0   | 0.0   | 0.0   | 6.0   | 94.0  | 0.0   | 83.0  |
| 10th %ile Term Code     | Skip  | Skip  | Min   | Skip  | Skip  | Min   | Coord | Skip  | Coord |

**Intersection Summary**  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 13 (13%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated



Lanes and Geometrics 2020 Market with Traffic Mitigation  
AM PEAK  
11: Mark Center Dr/Mark Center Dr/ Southern Towers & Seminary Rd

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT  | WBR   | NBL   | NBT  | NBR   | SBL   | SBT  | SBR   |
|---------------------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|
| Lane Configurations | ↔     | ↔↔↔  | ↔     | ↔     | ↔↔↔  | ↔     | ↔     | ↔    | ↔↔↔   | ↔     | ↔    | ↔     |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   | 12    |
| Grade (%)           |       | 0%   |       |       | -1%  |       |       | 0%   |       |       | 0%   |       |
| Storage Length (ft) | 225   |      | 400   | 0     |      | 200   | 250   |      | 250   | 150   |      | 150   |
| Storage Lanes       | 1     |      | 1     | 1     |      | 1     | 1     |      | 2     | 1     |      | 1     |
| Taper Length (ft)   | 50    |      |       | 50    |      |       | 50    |      |       | 50    |      |       |
| Lane Util. Factor   | 1.00  | 0.91 | 1.00  | 1.00  | 0.91 | 1.00  | 1.00  | 1.00 | 0.76  | 0.97  | 1.00 | 1.00  |
| Ped Bike Factor     |       |      |       |       |      |       |       |      |       |       |      | 0.99  |
| Frt                 |       |      | 0.850 |       |      | 0.850 |       |      | 0.850 |       |      | 0.850 |
| Flt Protected       | 0.950 |      |       | 0.950 |      |       | 0.950 |      |       | 0.950 |      |       |
| Satd. Flow (prot)   | 1770  | 5085 | 1583  | 1778  | 5111 | 1591  | 1770  | 1863 | 3610  | 3433  | 1863 | 1583  |
| Flt Permitted       | 0.950 |      |       | 0.950 |      |       | 0.950 |      |       | 0.950 |      |       |
| Satd. Flow (perm)   | 1770  | 5085 | 1583  | 1778  | 5111 | 1591  | 1770  | 1863 | 3610  | 3433  | 1863 | 1562  |
| Right Turn on Red   |       |      | Yes   |       |      | Yes   |       |      | No    |       |      | Yes   |
| Satd. Flow (RTOR)   |       |      | 306   |       |      | 68    |       |      |       |       |      | 59    |
| Link Speed (mph)    |       | 35   |       |       | 35   |       |       | 25   |       |       |      | 25    |
| Link Distance (ft)  |       | 692  |       |       | 387  |       |       | 791  |       |       |      | 642   |
| Travel Time (s)     |       | 13.5 |       |       | 7.5  |       |       | 21.6 |       |       |      | 17.5  |

Intersection Summary

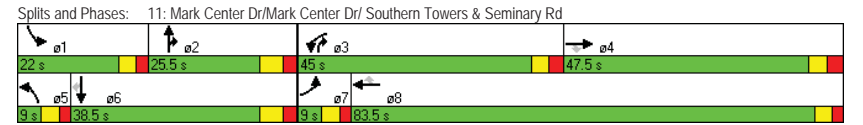
Area Type: Other

Timings 2020 Market with Traffic Mitigation  
AM PEAK  
11: Mark Center Dr/Mark Center Dr/ Southern Towers & Seminary Rd

| Lane Group           | EBL  | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔    | ↔↔↔   | ↔     | ↔     | ↔↔↔   | ↔     | ↔    | ↔     | ↔↔↔   | ↔     | ↔     | ↔     |
| Volume (vph)         | 20   | 1135  | 285   | 695   | 1995  | 95    | 30   | 15    | 235   | 280   | 75    | 55    |
| Turn Type            | Prot | NA    | Perm  | Prot  | NA    | Perm  | Prot | NA    | pt+ov | Prot  | NA    | Perm  |
| Protected Phases     | 7    | 4     |       | 3     | 8     |       | 5    | 2     | 2 3   | 1     | 6     |       |
| Permitted Phases     |      |       | 4     |       |       | 8     |      |       |       |       |       | 6     |
| Detector Phase       | 7    | 4     | 4     | 3     | 8     | 8     | 5    | 2     | 2 3   | 1     | 6     | 6     |
| Switch Phase         |      |       |       |       |       |       |      |       |       |       |       |       |
| Minimum Initial (s)  | 4.0  | 7.0   | 7.0   | 10.0  | 4.0   | 4.0   | 4.0  | 10.0  |       | 4.0   | 10.0  | 10.0  |
| Minimum Split (s)    | 9.0  | 13.0  | 13.0  | 24.5  | 29.0  | 29.0  | 9.0  | 25.5  |       | 9.0   | 38.5  | 38.5  |
| Total Split (s)      | 9.0  | 47.5  | 47.5  | 45.0  | 83.5  | 83.5  | 9.0  | 25.5  | 70.5  | 22.0  | 38.5  | 38.5  |
| Total Split (%)      | 6.4% | 33.9% | 33.9% | 32.1% | 59.6% | 59.6% | 6.4% | 18.2% | 50.4% | 15.7% | 27.5% | 27.5% |
| Yellow Time (s)      | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 4.0   |       | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 2.0  | 3.0   | 3.0   | 2.5   | 2.0   | 2.0   | 2.0  | 2.5   |       | 2.0   | 2.5   | 2.5   |
| Lost Time Adjust (s) | -1.5 | -2.5  | 0.0   | -1.5  | -2.5  | 0.0   | -2.0 | -2.0  | -1.5  | -1.5  | -1.5  | -1.5  |
| Total Lost Time (s)  | 3.5  | 3.5   | 6.0   | 4.0   | 2.5   | 5.0   | 3.0  | 4.5   | 5.0   | 3.5   | 5.0   | 5.0   |
| Lead/Lag             | Lead | Lag   | Lag   | Lead  | Lag   | Lag   | Lead | Lag   |       | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   |      |       |       |       |       |       |      |       |       |       |       |       |
| Recall Mode          | None | C-Max | C-Max | None  | C-Max | C-Max | None | None  |       | None  | Max   | Max   |
| Act Effct Green (s)  | 5.5  | 44.0  | 41.5  | 41.0  | 84.6  | 82.1  | 6.0  | 22.0  | 66.5  | 17.5  | 37.1  | 37.1  |
| Actuated g/C Ratio   | 0.04 | 0.31  | 0.30  | 0.29  | 0.60  | 0.59  | 0.04 | 0.16  | 0.48  | 0.12  | 0.26  | 0.26  |
| v/c Ratio            | 0.31 | 0.76  | 0.45  | 1.43  | 0.69  | 0.11  | 0.42 | 0.05  | 0.15  | 0.70  | 0.16  | 0.13  |
| Control Delay        | 67.0 | 37.1  | 6.5   | 242.7 | 20.9  | 5.9   | 82.2 | 51.7  | 21.3  | 68.1  | 42.2  | 10.5  |
| Queue Delay          | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 67.0 | 37.1  | 6.5   | 242.7 | 21.0  | 5.9   | 82.2 | 51.7  | 21.3  | 68.1  | 42.2  | 10.5  |
| LOS                  | E    | D     | A     | F     | C     | A     | F    | D     | C     | E     | D     | B     |
| Approach Delay       |      | 31.5  |       |       | 75.8  |       |      | 29.3  |       |       | 55.6  |       |
| Approach LOS         |      | C     |       |       | E     |       |      | C     |       |       | E     |       |

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 129 (92%), Referenced to phase 4:EBT and 8:WBT, Start of Green  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.43  
 Intersection Signal Delay: 58.5  
 Intersection LOS: E  
 Intersection Capacity Utilization 97.9%  
 ICU Level of Service F  
 Analysis Period (min) 15



Phasings 2020 Market with Traffic Mitigation  
**11: Mark Center Dr/Mark Center Dr/ Southern Towers & Seminary Rd** AM PEAK

| Lane Group              | EBL  | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|
| Protected Phases        | 7    | 4     |       | 3     | 8     |       | 5    | 2     | 23    | 1     | 6     |       |
| Permitted Phases        |      |       | 4     |       |       | 8     |      |       |       |       |       | 6     |
| Minimum Initial (s)     | 4.0  | 7.0   | 7.0   | 10.0  | 4.0   | 4.0   | 4.0  | 10.0  |       | 4.0   | 10.0  | 10.0  |
| Minimum Split (s)       | 9.0  | 13.0  | 13.0  | 24.5  | 29.0  | 29.0  | 9.0  | 25.5  |       | 9.0   | 38.5  | 38.5  |
| Total Split (s)         | 9.0  | 47.5  | 47.5  | 45.0  | 83.5  | 83.5  | 9.0  | 25.5  | 70.5  | 22.0  | 38.5  | 38.5  |
| Total Split (%)         | 6.4% | 33.9% | 33.9% | 32.1% | 59.6% | 59.6% | 6.4% | 18.2% | 50.4% | 15.7% | 27.5% | 27.5% |
| Maximum Green (s)       | 4.0  | 41.5  | 41.5  | 39.5  | 78.5  | 78.5  | 4.0  | 19.0  |       | 17.0  | 32.0  | 32.0  |
| Yellow Time (s)         | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 4.0   |       | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 2.0  | 3.0   | 3.0   | 2.5   | 2.0   | 2.0   | 2.0  | 2.5   |       | 2.0   | 2.5   | 2.5   |
| Lead/Lag                | Lead | Lag   | Lag   | Lead  | Lag   | Lag   | Lead | Lag   |       | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?      |      |       |       |       |       |       |      |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0  | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   | 3.0  | 0.2   |       | 3.0   | 0.2   | 0.2   |
| Minimum Gap (s)         | 3.0  | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   | 3.0  | 0.2   |       | 3.0   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | C-Max | C-Max | None  | C-Max | C-Max | None | None  |       | None  | Max   | Max   |
| Walk Time (s)           |      |       |       |       | 7.0   | 7.0   |      |       |       |       | 7.0   | 7.0   |
| Flash Dont Walk (s)     |      |       |       |       | 17.0  | 17.0  |      |       |       |       | 25.0  | 25.0  |
| Pedestrian Calls (#/hr) |      |       |       |       | 0     | 0     |      |       |       |       | 0     | 0     |
| 90th %ile Green (s)     | 4.0  | 41.5  | 41.5  | 39.5  | 78.5  | 78.5  | 4.0  | 19.0  |       | 17.0  | 32.0  | 32.0  |
| 90th %ile Term Code     | Max  | Coord | Coord | Max   | Coord | Coord | Max  | Hold  |       | Max   | MaxR  | MaxR  |
| 70th %ile Green (s)     | 4.0  | 41.5  | 41.5  | 39.5  | 78.5  | 78.5  | 4.0  | 19.0  |       | 17.0  | 32.0  | 32.0  |
| 70th %ile Term Code     | Max  | Coord | Coord | Max   | Coord | Coord | Max  | Hold  |       | Max   | MaxR  | MaxR  |
| 50th %ile Green (s)     | 4.0  | 41.5  | 41.5  | 39.5  | 78.5  | 78.5  | 4.0  | 19.0  |       | 17.0  | 32.0  | 32.0  |
| 50th %ile Term Code     | Max  | Coord | Coord | Max   | Coord | Coord | Max  | Hold  |       | Max   | MaxR  | MaxR  |
| 30th %ile Green (s)     | 0.0  | 41.5  | 41.5  | 39.5  | 87.5  | 87.5  | 0.0  | 20.3  |       | 15.7  | 41.0  | 41.0  |
| 30th %ile Term Code     | Skip | Coord | Coord | Max   | Coord | Coord | Skip | Hold  |       | Gap   | MaxR  | MaxR  |
| 10th %ile Green (s)     | 0.0  | 41.5  | 41.5  | 39.5  | 87.5  | 87.5  | 0.0  | 22.9  |       | 13.1  | 41.0  | 41.0  |
| 10th %ile Term Code     | Skip | Coord | Coord | Max   | Coord | Coord | Skip | Hold  |       | Gap   | MaxR  | MaxR  |

**Intersection Summary**  
 Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 129 (92%), Referenced to phase 4:EBT and 8:WBT, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics 2020 Market with Traffic Mitigation  
**13: Echols Ave & Seminary Rd** AM PEAK

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR   |
|---------------------|-------|-------|------|-------|-------|------|------|-------|------|------|------|-------|
| Lane Configurations |       |       |      |       |       |      |      |       |      |      |      |       |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   | 12   | 12    | 12   | 12   | 12   | 12    |
| Grade (%)           |       | -1%   |      |       | 1%    |      |      | 0%    |      |      |      | 0%    |
| Storage Length (ft) | 100   |       | 0    | 150   |       | 0    | 0    |       | 0    | 0    | 0    | 0     |
| Storage Lanes       | 1     |       | 0    | 1     |       | 0    | 0    |       | 0    | 0    | 0    | 0     |
| Taper Length (ft)   | 50    |       |      | 50    |       |      | 50   |       |      | 50   |      | 50    |
| 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  |
| Ped Bike Factor     |       | 1.00  |      |       |       |      |      |       |      |      |      | 0.99  |
| Frt                 |       | 0.999 |      |       | 0.999 |      |      | 0.885 |      |      |      | 0.958 |
| Flt Protected       | 0.950 |       |      | 0.950 |       |      |      | 0.993 |      |      |      | 0.967 |
| Satd. Flow (prot)   | 1778  | 3553  | 0    | 1761  | 3518  | 0    | 0    | 1637  | 0    | 0    | 1716 | 0     |
| Flt Permitted       | 0.103 |       |      | 0.193 |       |      |      | 0.993 |      |      |      | 0.967 |
| Satd. Flow (perm)   | 193   | 3553  | 0    | 358   | 3518  | 0    | 0    | 1637  | 0    | 0    | 1716 | 0     |
| Right Turn on Red   |       |       | Yes  |       |       | Yes  |      |       | Yes  |      |      | Yes   |
| Satd. Flow (RTOR)   |       |       |      |       | 1     |      |      | 91    |      |      |      | 5     |
| Link Speed (mph)    |       | 35    |      |       | 35    |      |      | 25    |      |      |      | 25    |
| Link Distance (ft)  |       | 996   |      |       | 564   |      |      | 704   |      |      |      | 795   |
| Travel Time (s)     |       | 19.4  |      |       | 11.0  |      |      | 19.2  |      |      |      | 21.7  |

**Intersection Summary**  
 Area Type: Other

**Timings**  
13: Echols Ave & Seminary Rd

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBT   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↕     | ↕     |
| Volume (vph)         | 5     | 1050  | 30    | 1605  | 0     | 0     |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | NA    | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     | 3     | 4     |
| Permitted Phases     | 2     |       | 6     |       |       |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 3     | 4     |
| Switch Phase         |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 6.0   | 10.0  | 4.0   | 7.0   | 7.0   |
| Minimum Split (s)    | 8.0   | 13.0  | 23.5  | 20.0  | 24.0  | 24.0  |
| Total Split (s)      | 8.0   | 68.4  | 23.6  | 84.0  | 24.0  | 24.0  |
| Total Split (%)      | 5.7%  | 48.9% | 16.9% | 60.0% | 17.1% | 17.1% |
| Yellow Time (s)      | 3.5   | 4.0   | 4.5   | 3.5   | 3.0   | 3.0   |
| All-Red Time (s)     | 0.5   | 3.0   | 3.0   | 0.5   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -3.5  | -3.5  | -3.0  | -3.5  | -1.0  | -1.0  |
| Total Lost Time (s)  | 0.5   | 3.5   | 4.5   | 0.5   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | None  |
| Act Effct Green (s)  | 108.1 | 99.9  | 110.6 | 113.0 | 11.3  | 10.4  |
| Actuated g/C Ratio   | 0.77  | 0.71  | 0.79  | 0.81  | 0.08  | 0.07  |
| v/c Ratio            | 0.02  | 0.45  | 0.08  | 0.61  | 0.50  | 0.12  |
| Control Delay        | 6.2   | 12.2  | 3.6   | 5.7   | 23.2  | 46.5  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 6.2   | 12.2  | 3.6   | 5.7   | 23.2  | 46.5  |
| LOS                  | A     | B     | A     | A     | C     | D     |
| Approach Delay       |       | 12.2  |       | 5.7   | 23.3  | 46.5  |
| Approach LOS         |       | B     |       | A     | C     | D     |

**Intersection Summary**

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 24 (17%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 105  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.61  
 Intersection Signal Delay: 8.9  
 Intersection LOS: A  
 Intersection Capacity Utilization 58.1%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 13: Echols Ave & Seminary Rd



**Phasings**  
13: Echols Ave & Seminary Rd

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group              | EBL  | EBT   | WBL   | WBT   | NBT   | SBT   |
|-------------------------|------|-------|-------|-------|-------|-------|
| Protected Phases        | 5    | 2     | 1     | 6     | 3     | 4     |
| Permitted Phases        | 2    |       | 6     |       |       |       |
| Minimum Initial (s)     | 4.0  | 6.0   | 10.0  | 4.0   | 7.0   | 7.0   |
| Minimum Split (s)       | 8.0  | 13.0  | 23.5  | 20.0  | 24.0  | 24.0  |
| Total Split (s)         | 8.0  | 68.4  | 23.6  | 84.0  | 24.0  | 24.0  |
| Total Split (%)         | 5.7% | 48.9% | 16.9% | 60.0% | 17.1% | 17.1% |
| Maximum Green (s)       | 4.0  | 61.4  | 16.1  | 80.0  | 19.0  | 19.0  |
| Yellow Time (s)         | 3.5  | 4.0   | 4.5   | 3.5   | 3.0   | 3.0   |
| All-Red Time (s)        | 0.5  | 3.0   | 3.0   | 0.5   | 2.0   | 2.0   |
| Lead/Lag                | Lead | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |      |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0  | 2.0   | 0.2   | 3.0   | 4.0   | 2.0   |
| Minimum Gap (s)         | 3.0  | 2.0   | 0.2   | 3.0   | 4.0   | 2.0   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | C-Min | None  | C-Min | None  | None  |
| Walk Time (s)           |      |       | 4.0   | 5.0   | 4.0   | 4.0   |
| Flash Dont Walk (s)     |      |       | 12.0  | 11.0  | 15.0  | 15.0  |
| Pedestrian Calls (#/hr) |      |       | 5     | 0     | 5     | 5     |
| 90th %ile Green (s)     | 4.0  | 61.5  | 16.0  | 80.0  | 19.0  | 19.0  |
| 90th %ile Term Code     | Max  | Coord | Ped   | Coord | Ped   | Ped   |
| 70th %ile Green (s)     | 0.0  | 88.1  | 10.0  | 108.6 | 10.4  | 7.0   |
| 70th %ile Term Code     | Skip | Coord | Min   | Coord | Gap   | Min   |
| 50th %ile Green (s)     | 0.0  | 90.5  | 10.0  | 111.0 | 8.0   | 7.0   |
| 50th %ile Term Code     | Skip | Coord | Min   | Coord | Gap   | Min   |
| 30th %ile Green (s)     | 0.0  | 121.0 | 0.0   | 124.0 | 7.0   | 0.0   |
| 30th %ile Term Code     | Skip | Coord | Skip  | Coord | Min   | Skip  |
| 10th %ile Green (s)     | 0.0  | 121.0 | 0.0   | 124.0 | 7.0   | 0.0   |
| 10th %ile Term Code     | Skip | Coord | Skip  | Coord | Min   | Skip  |

**Intersection Summary**

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 24 (17%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
14: Dawes Ave & Seminary Rd

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL  | NBT   | NBR   | SBL  | SBT   | SBR   |
|---------------------|-------|------|------|-------|-------|------|------|-------|-------|------|-------|-------|
| Lane Configurations | ↔     | ↕    | ↔    | ↔     | ↕     | ↔    | ↔    | ↕     | ↔     | ↔    | ↔     | ↕     |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12   | 12   | 12    | 12    | 12   | 12    | 12    |
| Grade (%)           | 0%    |      | 0%   |       | 0%    |      | 0%   |       | 0%    |      | 0%    |       |
| Storage Length (ft) | 240   |      | 0    | 55    |       | 0    | 0    |       | 0     | 0    |       | 0     |
| Storage Lanes       | 1     |      | 0    | 1     |       | 0    | 0    |       | 0     | 0    |       | 1     |
| Taper Length (ft)   | 50    |      |      | 50    |       |      | 50   |       |       | 50   |       |       |
| 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  |
| Ped Bike Factor     | 1.00  |      |      |       | 1.00  |      |      |       | 0.99  |      |       |       |
| Frt                 | 0.999 |      |      |       | 0.995 |      |      |       | 0.927 |      |       |       |
| Frt Protected       | 0.950 |      |      | 0.950 |       |      |      |       | 0.991 |      |       | 0.976 |
| Satd. Flow (prot)   | 1770  | 3535 | 0    | 1770  | 3519  | 0    | 0    | 1691  | 0     | 0    | 1818  | 1583  |
| Frt Permitted       | 0.126 |      |      | 0.240 |       |      |      | 0.939 |       |      | 0.839 |       |
| Satd. Flow (perm)   | 235   | 3535 | 0    | 447   | 3519  | 0    | 0    | 1602  | 0     | 0    | 1563  | 1527  |
| Right Turn on Red   |       |      | Yes  |       |       | Yes  |      |       | Yes   |      |       | Yes   |
| Satd. Flow (RTOR)   | 1     |      |      |       | 6     |      |      |       | 32    |      |       |       |
| Link Speed (mph)    | 35    |      |      |       | 35    |      |      |       | 25    |      |       |       |
| Link Distance (ft)  | 294   |      |      |       | 996   |      |      |       | 786   |      |       |       |
| Travel Time (s)     | 5.7   |      |      |       | 19.4  |      |      |       | 21.4  |      |       |       |

Intersection Summary

Area Type: Other

Timings  
14: Dawes Ave & Seminary Rd

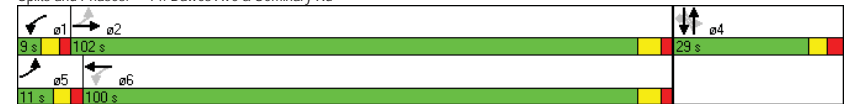
2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↕     |
| Volume (vph)         | 35    | 1020  | 35    | 1440  | 10    | 15    | 10    | 10    | 20    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | NA    | Perm  |
| Protected Phases     | 5     | 2     | 1     | 6     |       | 4     |       | 4     |       |
| Permitted Phases     | 2     |       | 6     |       | 4     |       | 4     |       | 4     |
| Detector Phase       | 5     | 2     | 1     | 6     | 4     | 4     | 4     | 4     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 10.0  | 4.0   | 10.0  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)    | 9.0   | 30.0  | 9.0   | 16.0  | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  |
| Total Split (s)      | 11.0  | 102.0 | 9.0   | 100.0 | 29.0  | 29.0  | 29.0  | 29.0  | 29.0  |
| Total Split (%)      | 7.9%  | 72.9% | 6.4%  | 71.4% | 20.7% | 20.7% | 20.7% | 20.7% | 20.7% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | -1.0  | -2.0  | -1.0  | -2.0  | -2.0  | -2.0  | -2.0  | -2.0  | -2.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 119.8 | 115.7 | 117.9 | 114.7 |       | 12.7  |       | 12.7  | 12.7  |
| Actuated g/C Ratio   | 0.86  | 0.83  | 0.84  | 0.82  |       | 0.09  |       | 0.09  | 0.09  |
| v/c Ratio            | 0.14  | 0.38  | 0.09  | 0.56  |       | 0.34  |       | 0.15  | 0.14  |
| Control Delay        | 3.3   | 4.9   | 0.9   | 2.3   |       | 35.5  |       | 58.8  | 20.6  |
| Queue Delay          | 0.0   | 0.3   | 0.0   | 0.2   |       | 0.0   |       | 0.0   | 0.0   |
| Total Delay          | 3.3   | 5.1   | 0.9   | 2.4   |       | 35.5  |       | 58.8  | 20.6  |
| LOS                  | A     | A     | A     | A     |       | D     |       | E     | C     |
| Approach Delay       | 5.0   |       | 2.4   |       | 35.5  |       | 39.7  |       |       |
| Approach LOS         | A     |       | A     |       | D     |       | D     |       |       |

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 35 (25%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.56  
 Intersection Signal Delay: 4.7  
 Intersection Capacity Utilization 70.0%  
 Intersection LOS: A  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 14: Dawes Ave & Seminary Rd



Phasings  
14: Dawes Ave & Seminary Rd

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group              | EBL  | EBT   | WBL  | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|-------------------------|------|-------|------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 5    | 2     | 1    | 6     |       | 4     |       | 4     |       |
| Permitted Phases        | 2    |       | 6    |       | 4     |       | 4     |       | 4     |
| Minimum Initial (s)     | 4.0  | 10.0  | 4.0  | 10.0  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)       | 9.0  | 30.0  | 9.0  | 16.0  | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  |
| Total Split (s)         | 11.0 | 102.0 | 9.0  | 100.0 | 29.0  | 29.0  | 29.0  | 29.0  | 29.0  |
| Total Split (%)         | 7.9% | 72.9% | 6.4% | 71.4% | 20.7% | 20.7% | 20.7% | 20.7% | 20.7% |
| Maximum Green (s)       | 6.0  | 96.0  | 4.0  | 94.0  | 23.0  | 23.0  | 23.0  | 23.0  | 23.0  |
| Yellow Time (s)         | 3.0  | 4.0   | 3.0  | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0  | 2.0   | 2.0  | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead | Lag   | Lead | Lag   |       |       |       |       |       |
| Lead-Lag Optimize?      |      |       |      |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0  | 0.2   | 2.0  | 0.2   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Minimum Gap (s)         | 2.0  | 0.2   | 2.0  | 0.2   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | C-Max | None | C-Max | None  | None  | None  | None  | None  |
| Walk Time (s)           | 4.0  |       | 4.0  |       | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Flash Dont Walk (s)     |      | 20.0  |      |       | 17.0  | 17.0  | 17.0  | 17.0  | 17.0  |
| Pedestrian Calls (#/hr) |      | 5     |      |       | 5     | 5     | 5     | 5     | 5     |
| 90th %ile Green (s)     | 6.0  | 98.0  | 4.0  | 96.0  | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  |
| 90th %ile Term Code     | Max  | Coord | Max  | Coord | Ped   | Ped   | Ped   | Ped   | Ped   |
| 70th %ile Green (s)     | 5.1  | 110.4 | 4.0  | 109.3 | 8.6   | 8.6   | 8.6   | 8.6   | 8.6   |
| 70th %ile Term Code     | Gap  | Coord | Max  | Coord | Gap   | Gap   | Gap   | Gap   | Gap   |
| 50th %ile Green (s)     | 4.9  | 111.0 | 4.0  | 110.1 | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| 50th %ile Term Code     | Gap  | Coord | Max  | Coord | Min   | Min   | Min   | Min   | Min   |
| 30th %ile Green (s)     | 4.8  | 111.0 | 4.0  | 110.2 | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| 30th %ile Term Code     | Gap  | Coord | Max  | Coord | Min   | Min   | Min   | Min   | Min   |
| 10th %ile Green (s)     | 0.0  | 134.0 | 0.0  | 134.0 | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 10th %ile Term Code     | Skip | Coord | Skip | Coord | Skip  | Skip  | Skip  | Skip  | Skip  |

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 35 (25%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
15: Beauregard St & Mark Center Dr

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT  | WBR   | NBL   | NBT   | NBR  | SBL   | SBT  | SBR  |
|---------------------|-------|-------|------|-------|------|-------|-------|-------|------|-------|------|------|
| Lane Configurations |       |       |      |       |      |       |       |       |      |       |      |      |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12   | 12   |
| Grade (%)           |       | 0%    |      |       | 0%   |       |       | 0%    |      |       | 0%   |      |
| Storage Length (ft) | 0     |       | 0    | 0     |      | 200   | 190   |       | 200  | 0     |      | 0    |
| Storage Lanes       | 1     |       | 0    | 1     |      | 1     | 1     |       | 1    | 0     |      | 0    |
| Taper Length (ft)   | 50    |       |      | 50    |      |       | 50    |       |      | 50    |      |      |
| Lane Util. Factor   | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00  | 0.91  | 1.00 | 0.97  | 0.95 | 0.95 |
| Ped Bike Factor     |       |       |      |       |      | 0.99  |       |       |      |       | 1.00 |      |
| Frt                 |       | 0.925 |      |       |      | 0.850 |       | 0.850 |      | 0.965 |      |      |
| Flt Protected       | 0.950 |       |      | 0.950 |      |       | 0.950 |       |      | 0.950 |      |      |
| Satd. Flow (prot)   | 1770  | 1723  | 0    | 1770  | 1863 | 1583  | 1770  | 5085  | 1583 | 3433  | 3399 | 0    |
| Flt Permitted       | 0.754 |       |      | 0.634 |      |       | 0.950 |       |      | 0.950 |      |      |
| Satd. Flow (perm)   | 1405  | 1723  | 0    | 1181  | 1863 | 1560  | 1770  | 5085  | 1583 | 3433  | 3399 | 0    |
| Right Turn on Red   |       |       | Yes  |       |      | Yes   |       | Yes   |      | Yes   |      | Yes  |
| Satd. Flow (RTOR)   |       | 5     |      |       |      | 27    |       |       | 320  |       | 45   |      |
| Link Speed (mph)    |       | 25    |      |       | 25   |       |       | 35    |      |       | 35   |      |
| Link Distance (ft)  |       | 275   |      |       | 957  |       |       | 796   |      |       | 762  |      |
| Travel Time (s)     |       | 7.5   |      |       | 26.1 |       |       | 15.5  |      |       | 14.8 |      |

Intersection Summary

Area Type: Other

**Timings**  
15: Beauregard St & Mark Center Dr

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |
| Volume (vph)         | 15    | 5     | 35    | 5     | 25    | 65    | 1450  | 425   | 435   | 625   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 7     | 4     | 3     | 8     |       | 5     | 2     |       | 1     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 8     |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 7.0   | 4.0   | 4.0   | 4.0   | 4.0   | 10.0  | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 8.0   | 33.0  | 8.0   | 20.0  | 20.0  | 9.0   | 24.0  | 24.0  | 9.0   | 24.0  |
| Total Split (s)      | 8.0   | 33.0  | 8.0   | 33.0  | 33.0  | 18.0  | 65.0  | 65.0  | 34.0  | 81.0  |
| Total Split (%)      | 5.7%  | 23.6% | 5.7%  | 23.6% | 23.6% | 12.9% | 46.4% | 46.4% | 24.3% | 57.9% |
| Yellow Time (s)      | 3.5   | 3.0   | 3.5   | 3.5   | 3.5   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 0.5   | 3.0   | 0.5   | 0.5   | 0.5   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.0  | -2.0  | -2.0  | -2.0  | 0.0   | -1.0  | -2.0  | 0.0   | -1.0  | -2.0  |
| Total Lost Time (s)  | 2.0   | 4.0   | 2.0   | 2.0   | 4.0   | 4.0   | 6.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |
| Act Effct Green (s)  | 14.4  | 13.0  | 15.1  | 13.0  | 11.0  | 10.8  | 91.3  | 89.3  | 24.5  | 107.9 |
| Actuated g/C Ratio   | 0.10  | 0.09  | 0.11  | 0.09  | 0.08  | 0.08  | 0.65  | 0.64  | 0.18  | 0.77  |
| v/c Ratio            | 0.10  | 0.06  | 0.25  | 0.03  | 0.18  | 0.51  | 0.47  | 0.41  | 0.78  | 0.33  |
| Control Delay        | 49.7  | 37.9  | 54.3  | 51.0  | 19.6  | 72.9  | 9.9   | 3.0   | 38.4  | 18.0  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 49.7  | 37.9  | 54.3  | 51.0  | 19.6  | 72.9  | 9.9   | 3.0   | 38.4  | 18.0  |
| LOS                  | D     | D     | D     | D     | B     | E     | A     | A     | D     | B     |
| Approach Delay       | 45.1  |       | 40.7  |       |       | 10.5  |       |       | 25.1  |       |
| Approach LOS         | D     |       | D     |       |       | B     |       |       | C     |       |

**Intersection Summary**

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 25 (18%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.78  
 Intersection Signal Delay: 16.9  
 Intersection LOS: B  
 Intersection Capacity Utilization 59.2%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 15: Beauregard St & Mark Center Dr



**Phasings**  
15: Beauregard St & Mark Center Dr

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group              | EBL  | EBT   | WBL  | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 7    | 4     | 3    | 8     |       | 5     | 2     |       | 1     | 6     |
| Permitted Phases        | 4    |       | 8    |       | 8     |       |       | 2     |       |       |
| Minimum Initial (s)     | 4.0  | 7.0   | 4.0  | 4.0   | 4.0   | 4.0   | 10.0  | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)       | 8.0  | 33.0  | 8.0  | 20.0  | 20.0  | 9.0   | 24.0  | 24.0  | 9.0   | 24.0  |
| Total Split (s)         | 8.0  | 33.0  | 8.0  | 33.0  | 33.0  | 18.0  | 65.0  | 65.0  | 34.0  | 81.0  |
| Total Split (%)         | 5.7% | 23.6% | 5.7% | 23.6% | 23.6% | 12.9% | 46.4% | 46.4% | 24.3% | 57.9% |
| Maximum Green (s)       | 4.0  | 27.0  | 4.0  | 29.0  | 29.0  | 13.0  | 59.0  | 59.0  | 29.0  | 75.0  |
| Yellow Time (s)         | 3.5  | 3.0   | 3.5  | 3.5   | 3.5   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 0.5  | 3.0   | 0.5  | 0.5   | 0.5   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead | Lag   | Lead | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      | Yes  |       |      |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0  | 2.0   | 3.0  | 3.0   | 3.0   | 2.0   | 0.2   | 0.2   | 2.0   | 0.2   |
| Minimum Gap (s)         | 3.0  | 2.0   | 3.0  | 3.0   | 3.0   | 2.0   | 0.2   | 0.2   | 2.0   | 0.2   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | None  | None | None  | None  | None  | C-Max | C-Max | None  | C-Max |
| Walk Time (s)           | 8.0  |       | 5.0  | 5.0   |       | 6.0   | 6.0   |       | 6.0   |       |
| Flash Dont Walk (s)     | 19.0 |       | 11.0 | 11.0  |       | 12.0  | 12.0  |       | 12.0  |       |
| Pedestrian Calls (#/hr) | 5    |       | 0    | 0     |       | 5     | 5     |       | 5     |       |
| 90th %ile Green (s)     | 4.0  | 27.0  | 4.0  | 29.0  | 29.0  | 13.0  | 59.0  | 59.0  | 29.0  | 75.0  |
| 90th %ile Term Code     | Max  | Ped   | Max  | Hold  | Hold  | Max   | Coord | Coord | Max   | Coord |
| 70th %ile Green (s)     | 4.0  | 7.0   | 4.0  | 9.0   | 9.0   | 11.7  | 82.2  | 82.2  | 25.8  | 96.3  |
| 70th %ile Term Code     | Max  | Min   | Max  | Hold  | Hold  | Gap   | Coord | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 0.0  | 0.0   | 5.8  | 5.8   | 5.8   | 10.0  | 95.7  | 95.7  | 23.5  | 109.2 |
| 50th %ile Term Code     | Skip | Skip  | Hold | Gap   | Gap   | Coord | Coord | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 0.0  | 0.0   | 5.5  | 5.5   | 5.5   | 8.3   | 98.3  | 98.3  | 21.2  | 111.2 |
| 30th %ile Term Code     | Skip | Skip  | Hold | Hold  | Hold  | Gap   | Coord | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 111.2 | 111.2 | 17.8  | 134.0 |
| 10th %ile Term Code     | Skip | Skip  | Skip | Skip  | Skip  | Skip  | Coord | Coord | Gap   | Coord |

**Intersection Summary**

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 25 (18%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
16: Beauregard St & Highview Ln

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL   | NBT  | NBR  | SBL   | SBT   | SBR  |
|---------------------|-------|------|------|-------|-------|------|-------|------|------|-------|-------|------|
| Lane Configurations | ↔     | ↔    | ↔    | ↔     | ↔     | ↔    | ↔     | ↔    | ↔    | ↔     | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12   | 12    | 12   | 12   | 12    | 12    | 12   |
| Grade (%)           | 0%    |      |      |       | 0%    |      | 0%    |      |      |       | -1%   |      |
| Storage Length (ft) | 0     |      | 150  | 115   |       | 0    | 185   |      | 0    | 185   |       | 0    |
| Storage Lanes       | 1     |      | 1    | 1     |       | 0    | 1     |      | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50    |      |      | 50    |       |      | 50    |      |      | 50    |       |      |
| 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     | 0.99  |      |      |       | 0.98  |      | 1.00  |      |      |       | 1.00  |      |
| Frt                 | 0.867 |      |      |       | 0.867 |      | 0.992 |      |      |       | 0.990 |      |
| Flt Protected       | 0.950 |      |      | 0.950 |       |      | 0.950 |      |      | 0.950 |       |      |
| Satd. Flow (prot)   | 1770  | 1596 | 0    | 1770  | 1586  | 0    | 1770  | 3504 | 0    | 1778  | 3513  | 0    |
| Flt Permitted       | 0.729 |      |      | 0.729 |       |      | 0.393 |      |      | 0.048 |       |      |
| Satd. Flow (perm)   | 1358  | 1596 | 0    | 1358  | 1586  | 0    | 732   | 3504 | 0    | 90    | 3513  | 0    |
| Right Turn on Red   |       |      | Yes  |       |       | Yes  |       |      | Yes  |       |       | Yes  |
| Satd. Flow (RTOR)   | 38    |      |      |       | 38    |      | 9     |      |      |       | 11    |      |
| Link Speed (mph)    | 25    |      |      |       | 25    |      | 35    |      |      |       | 35    |      |
| Link Distance (ft)  | 429   |      |      |       | 351   |      | 718   |      |      |       | 796   |      |
| Travel Time (s)     | 11.7  |      |      |       | 9.6   |      | 14.0  |      |      |       | 15.5  |      |

Intersection Summary

Area Type: Other

Timings  
16: Beauregard St & Highview Ln

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 105   | 5     | 5     | 5     | 15    | 1800  | 35    | 590   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 4     |       | 4     |       | 4     |       | 5     |       |
| Permitted Phases     | 4     |       | 4     |       | 2     |       | 6     |       |
| Detector Phase       | 4     |       | 4     |       | 5     |       | 2     |       |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 31.0  | 31.0  | 31.0  | 31.0  | 9.0   | 31.0  | 9.0   | 31.0  |
| Total Split (s)      | 31.0  | 31.0  | 31.0  | 31.0  | 9.0   | 100.0 | 9.0   | 100.0 |
| Total Split (%)      | 22.1% | 22.1% | 22.1% | 22.1% | 6.4%  | 71.4% | 6.4%  | 71.4% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  | 16.9  | 16.9  | 16.9  | 16.9  | 107.9 | 102.4 | 110.2 | 106.9 |
| Actuated g/C Ratio   | 0.12  | 0.12  | 0.12  | 0.12  | 0.77  | 0.73  | 0.79  | 0.76  |
| v/c Ratio            | 0.69  | 0.19  | 0.03  | 0.19  | 0.03  | 0.80  | 0.27  | 0.25  |
| Control Delay        | 79.2  | 19.6  | 51.0  | 19.6  | 1.7   | 5.5   | 26.1  | 2.3   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.1   | 0.0   | 0.0   |
| Total Delay          | 79.2  | 19.6  | 51.0  | 19.6  | 1.7   | 5.6   | 26.1  | 2.3   |
| LOS                  | E     | B     | D     | B     | A     | A     | C     | A     |
| Approach Delay       | 62.7  |       | 22.9  |       | 5.6   |       | 3.6   |       |
| Approach LOS         | E     |       | C     |       | A     |       | A     |       |

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 133 (95%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.80  
 Intersection Signal Delay: 8.3  
 Intersection LOS: A  
 Intersection Capacity Utilization 75.7%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 16: Beauregard St & Highview Ln



Phasings  
16: Beauregard St & Highview Ln

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL  | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|------|-------|
| Protected Phases        |       | 4     |       | 4     | 5     | 2     | 1    | 6     |
| Permitted Phases        | 4     |       | 4     |       | 2     |       | 6    |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 4.0   | 10.0  | 4.0  | 10.0  |
| Minimum Split (s)       | 31.0  | 31.0  | 31.0  | 31.0  | 9.0   | 31.0  | 9.0  | 31.0  |
| Total Split (s)         | 31.0  | 31.0  | 31.0  | 31.0  | 9.0   | 100.0 | 9.0  | 100.0 |
| Total Split (%)         | 22.1% | 22.1% | 22.1% | 22.1% | 6.4%  | 71.4% | 6.4% | 71.4% |
| Maximum Green (s)       | 25.0  | 25.0  | 25.0  | 25.0  | 4.0   | 94.0  | 4.0  | 94.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0  | 2.0   |
| Lead/Lag                |       |       |       |       | Lead  | Lag   | Lead | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |      |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | C-Max | None | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   |       | 7.0   |      | 7.0   |
| Flash Dont Walk (s)     | 18.0  | 18.0  | 18.0  | 18.0  |       | 18.0  |      | 18.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     |       | 0     |      | 0     |
| 90th %ile Green (s)     | 23.9  | 23.9  | 23.9  | 23.9  | 5.1   | 94.0  | 5.1  | 94.0  |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Max   | Coord | Max  | Coord |
| 70th %ile Green (s)     | 19.7  | 19.7  | 19.7  | 19.7  | 5.9   | 96.9  | 6.4  | 97.4  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Coord | Coord | Gap  | Coord |
| 50th %ile Green (s)     | 16.9  | 16.9  | 16.9  | 16.9  | 0.0   | 100.0 | 6.1  | 111.1 |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Skip  | Coord | Gap  | Coord |
| 30th %ile Green (s)     | 14.1  | 14.1  | 14.1  | 14.1  | 0.0   | 103.1 | 5.8  | 113.9 |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Skip  | Coord | Gap  | Coord |
| 10th %ile Green (s)     | 9.9   | 9.9   | 9.9   | 9.9   | 0.0   | 118.1 | 0.0  | 118.1 |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Skip  | Coord | Skip | Coord |

**Intersection Summary**  
 Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 133 (95%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT  | SBR   |
|---------------------|-------|------|-------|-------|-------|------|-------|-------|------|-------|------|-------|
| Lane Configurations |       |      |       |       |       |      |       |       |      |       |      |       |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12   | 12    |
| Grade (%)           |       | 0%   |       |       | 0%    |      |       | 0%    |      |       | 0%   |       |
| Storage Length (ft) | 235   |      | 0     | 0     |       | 0    | 235   |       | 0    | 150   |      | 170   |
| Storage Lanes       | 1     |      | 1     | 1     |       | 1    | 1     |       | 0    | 1     |      | 1     |
| Taper Length (ft)   | 50    |      |       | 50    |       |      | 50    |       |      | 50    |      |       |
| Lane Util. Factor   | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00 | 0.97  | 0.95  | 0.95 | 1.00  | 0.95 | 1.00  |
| Ped Bike Factor     |       |      |       |       | 0.99  |      |       |       |      |       |      | 0.98  |
| Frt                 |       |      | 0.850 |       | 0.911 |      |       | 0.999 |      |       |      | 0.850 |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (prot)   | 1770  | 1863 | 1583  | 1770  | 1673  | 0    | 3433  | 3536  | 0    | 1770  | 3539 | 1417  |
| Flt Permitted       | 0.567 |      |       | 0.754 |       |      | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (perm)   | 1056  | 1863 | 1583  | 1405  | 1673  | 0    | 3433  | 3536  | 0    | 1770  | 3539 | 1389  |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |       |       | Yes  |       |      | Yes   |
| Satd. Flow (RTOR)   |       |      | 671   |       | 16    |      |       | 1     |      |       |      | 124   |
| Link Speed (mph)    |       | 35   |       |       | 15    |      |       | 35    |      |       |      | 35    |
| Link Distance (ft)  |       | 1573 |       |       | 252   |      |       | 414   |      |       |      | 921   |
| Travel Time (s)     |       | 30.6 |       |       | 11.5  |      |       | 8.1   |      |       |      | 17.9  |

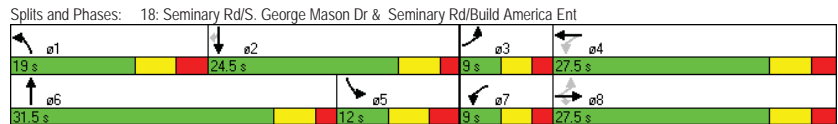
**Intersection Summary**  
 Area Type: Other



**Timings** 2020 Market with Traffic Mitigation  
**18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent** AM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↘     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↘     |
| Volume (vph)         | 165   | 5     | 650   | 20    | 10    | 690   | 775   | 20    | 390   | 115   |
| Turn Type            | pm+pt | NA    | Perm  | pm+pt | NA    | Prot  | NA    | Prot  | NA    | Perm  |
| Protected Phases     | 3     | 8     | 7     | 4     | 1     | 6     | 5     | 2     |       |       |
| Permitted Phases     | 8     |       | 8     | 4     |       |       |       |       |       | 2     |
| Detector Phase       | 3     | 8     | 8     | 7     | 4     | 1     | 6     | 5     | 2     | 2     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 5.0   | 5.0   | 4.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.0   | 27.5  | 27.5  | 9.0   | 11.5  | 12.0  | 11.0  | 12.0  | 24.0  | 24.0  |
| Total Split (s)      | 9.0   | 27.5  | 27.5  | 9.0   | 27.5  | 19.0  | 31.5  | 12.0  | 24.5  | 24.5  |
| Total Split (%)      | 11.3% | 34.4% | 34.4% | 11.3% | 34.4% | 23.8% | 39.4% | 15.0% | 30.6% | 30.6% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.5   | 2.5   | 2.0   | 2.5   | 3.0   | 2.0   | 3.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | -3.0  | -3.0  | -3.0  | -2.0  | -3.0  | -2.0  | -2.0  |
| Total Lost Time (s)  | 2.5   | 4.0   | 4.0   | 2.0   | 3.5   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | Max   | None  | None  | None  |
| Act Effct Green (s)  | 16.7  | 13.1  | 13.1  | 14.5  | 13.2  | 15.9  | 31.6  | 8.5   | 15.2  | 15.2  |
| Actuated g/C Ratio   | 0.28  | 0.22  | 0.22  | 0.24  | 0.22  | 0.27  | 0.53  | 0.14  | 0.25  | 0.25  |
| v/c Ratio            | 0.43  | 0.01  | 0.80  | 0.06  | 0.07  | 0.81  | 0.45  | 0.09  | 0.46  | 0.28  |
| Control Delay        | 19.6  | 20.2  | 10.8  | 15.0  | 13.6  | 34.4  | 14.0  | 30.6  | 22.1  | 6.9   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 19.6  | 20.2  | 10.8  | 15.0  | 13.6  | 34.4  | 14.0  | 30.6  | 22.1  | 6.9   |
| LOS                  | B     | C     | B     | B     | B     | C     | B     | C     | C     | A     |
| Approach Delay       |       | 12.6  |       |       | 14.2  |       | 23.6  |       | 19.1  |       |
| Approach LOS         |       | B     |       |       | B     |       | C     |       | B     |       |

| Intersection Summary                    |                        |
|---|------------------------|
| Cycle Length: 80                        |                        |
| Actuated Cycle Length: 59.7             |                        |
| Natural Cycle: 80                       |                        |
| Control Type: Semi Act-Uncoord          |                        |
| Maximum v/c Ratio: 0.81                 |                        |
| Intersection Signal Delay: 19.5         | Intersection LOS: B    |
| Intersection Capacity Utilization 65.1% | ICU Level of Service C |
| Analysis Period (min) 15                |                        |



**Phasings** 2020 Market with Traffic Mitigation  
**18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent** AM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 3     | 8     |       | 7     | 4     | 1     | 6     | 5     | 2     |       |
| Permitted Phases        | 8     |       | 8     | 4     |       |       |       |       |       | 2     |
| Minimum Initial (s)     | 4.0   | 5.0   | 5.0   | 4.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)       | 9.0   | 27.5  | 27.5  | 9.0   | 11.5  | 12.0  | 11.0  | 12.0  | 24.0  | 24.0  |
| Total Split (s)         | 9.0   | 27.5  | 27.5  | 9.0   | 27.5  | 19.0  | 31.5  | 12.0  | 24.5  | 24.5  |
| Total Split (%)         | 11.3% | 34.4% | 34.4% | 11.3% | 34.4% | 23.8% | 39.4% | 15.0% | 30.6% | 30.6% |
| Maximum Green (s)       | 4.0   | 21.0  | 21.0  | 4.0   | 21.0  | 12.0  | 25.5  | 5.0   | 18.5  | 18.5  |
| Yellow Time (s)         | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 2.0   | 2.5   | 2.5   | 2.0   | 2.5   | 3.0   | 2.0   | 3.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | Min   | Max   | None  | None  | None  |
| Walk Time (s)           |       | 7.0   | 7.0   |       |       |       |       |       | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       | 14.0  | 14.0  |       |       |       |       |       | 11.0  | 11.0  |
| Pedestrian Calls (#/hr) |       | 0     | 0     |       |       |       |       |       | 0     | 0     |
| 90th %ile Green (s)     | 4.0   | 21.0  | 21.0  | 4.0   | 21.0  | 12.0  | 25.5  | 5.0   | 18.5  | 18.5  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Hold  | Max   | MaxR  | Max   | Max   | Max   |
| 70th %ile Green (s)     | 4.0   | 16.0  | 16.0  | 4.0   | 16.0  | 12.0  | 25.5  | 5.0   | 18.5  | 18.5  |
| 70th %ile Term Code     | Max   | Gap   | Gap   | Max   | Hold  | Max   | MaxR  | Max   | Hold  | Hold  |
| 50th %ile Green (s)     | 9.6   | 8.1   | 8.1   | 0.0   | 0.0   | 12.0  | 30.3  | 0.0   | 11.3  | 11.3  |
| 50th %ile Term Code     | Hold  | Gap   | Gap   | Skip  | Skip  | Max   | Hold  | Skip  | Gap   | Gap   |
| 30th %ile Green (s)     | 7.1   | 5.6   | 5.6   | 0.0   | 0.0   | 12.0  | 28.9  | 0.0   | 9.9   | 9.9   |
| 30th %ile Term Code     | Hold  | Gap   | Gap   | Skip  | Skip  | Max   | Hold  | Skip  | Gap   | Gap   |
| 10th %ile Green (s)     | 7.1   | 5.6   | 5.6   | 0.0   | 0.0   | 12.0  | 27.5  | 0.0   | 8.5   | 8.5   |
| 10th %ile Term Code     | Hold  | Gap   | Gap   | Skip  | Skip  | Max   | Hold  | Skip  | Gap   | Gap   |

| Intersection Summary           |  |
|--------------------------------|--|
| Cycle Length: 80               |  |
| Actuated Cycle Length: 59.7    |  |
| Control Type: Semi Act-Uncoord |  |
| 90th %ile Actuated Cycle: 80   |  |
| 70th %ile Actuated Cycle: 75   |  |
| 50th %ile Actuated Cycle: 50.9 |  |
| 30th %ile Actuated Cycle: 47   |  |
| 10th %ile Actuated Cycle: 45.6 |  |

Lanes and Geometrics  
20: Hampton Dr & Braddock Rd

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT   | NBR   | SBL  | SBT   | SBR  |
|---------------------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|------|
| Lane Configurations | ↔     | ↕    | ↔     | ↔     | ↕     | ↔    | ↔     | ↕     | ↔     | ↔    | ↕     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |      | 0%    |       | 0%    |      | 0%    |       | 0%    |      | 0%    |      |
| Storage Length (ft) | 170   |      | 0     | 125   |       | 0    | 0     |       | 0     | 0    |       | 0    |
| Storage Lanes       | 1     |      | 0     | 1     |       | 0    | 0     |       | 1     | 0    |       | 1    |
| Taper Length (ft)   | 50    |      |       | 50    |       |      | 50    |       |       | 50   |       |      |
| 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 |
| Ped Bike Factor     | 1.00  |      | 1.00  |       | 1.00  |      | 1.00  |       | 1.00  |      | 1.00  |      |
| Frt                 | 0.993 |      | 0.965 |       | 0.850 |      | 0.850 |       | 0.850 |      | 0.850 |      |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      |       | 0.982 |       |      | 0.955 |      |
| Satd. Flow (prot)   | 1770  | 3512 | 0     | 1770  | 3405  | 0    | 0     | 1829  | 1583  | 0    | 1779  | 1583 |
| Flt Permitted       | 0.209 |      |       | 0.614 |       |      |       | 0.849 |       |      | 0.614 |      |
| Satd. Flow (perm)   | 389   | 3512 | 0     | 1144  | 3405  | 0    | 0     | 1581  | 1583  | 0    | 1144  | 1561 |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |       |       | Yes   |      |       | Yes  |
| Satd. Flow (RTOR)   | 7     |      | 52    |       | 38    |      | 38    |       | 25    |      | 102   |      |
| Link Speed (mph)    | 35    |      | 35    |       | 25    |      | 25    |       | 25    |      | 25    |      |
| Link Distance (ft)  | 1840  |      | 1126  |       | 416   |      | 416   |       | 1381  |      | 1381  |      |
| Travel Time (s)     | 35.8  |      | 21.9  |       | 11.3  |      | 11.3  |       | 37.7  |      | 37.7  |      |

Intersection Summary

Area Type: Other

Timings  
20: Hampton Dr & Braddock Rd

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↔     | ↔     | ↕     | ↔     |
| Volume (vph)         | 95    | 195   | 25    | 795   | 40    | 70    | 35    | 65    | 5     | 95    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | Perm  | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     | 3     | 3     | 3     | 3     | 3     | 3     |
| Permitted Phases     | 6     | 2     | 2     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |
| Detector Phase       | 1     | 6     | 5     | 2     | 3     | 3     | 3     | 3     | 3     | 3     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 9.0   | 16.5  | 9.0   | 16.5  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  |
| Total Split (s)      | 13.0  | 65.0  | 9.0   | 61.0  | 36.0  | 36.0  | 36.0  | 36.0  | 36.0  | 36.0  |
| Total Split (%)      | 11.8% | 59.1% | 8.2%  | 55.5% | 32.7% | 32.7% | 32.7% | 32.7% | 32.7% | 32.7% |
| Yellow Time (s)      | 3.0   | 3.5   | 3.0   | 3.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| 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)  | 5.0   | 6.5   | 5.0   | 6.5   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 84.3  | 78.8  | 80.3  | 73.9  | 12.6  | 12.6  | 12.6  | 12.6  | 12.6  | 12.6  |
| Actuated g/C Ratio   | 0.77  | 0.72  | 0.73  | 0.67  | 0.11  | 0.11  | 0.11  | 0.11  | 0.11  | 0.11  |
| v/c Ratio            | 0.27  | 0.09  | 0.03  | 0.49  | 0.65  | 0.18  | 0.57  | 0.38  | 0.38  | 0.38  |
| Control Delay        | 5.1   | 5.9   | 3.2   | 8.8   | 62.5  | 14.7  | 62.1  | 12.3  | 12.3  | 12.3  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 5.1   | 5.9   | 3.2   | 8.8   | 62.5  | 14.7  | 62.1  | 12.3  | 12.3  | 12.3  |
| LOS                  | A     | A     | A     | A     | E     | B     | E     | B     | E     | B     |
| Approach Delay       | 5.6   |       | 8.7   |       | 50.8  |       | 33.4  |       | 33.4  |       |
| Approach LOS         | A     |       | A     |       | D     |       | C     |       | C     |       |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 63 (57%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.65  
 Intersection Signal Delay: 14.2  
 Intersection LOS: B  
 Intersection Capacity Utilization 62.2%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 20: Hampton Dr & Braddock Rd



Phasings

2020 Market with Traffic Mitigation

20: Hampton Dr & Braddock Rd

AM PEAK

| Lane Group              | EBL   | EBT   | WBL  | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 1     | 6     | 5    | 2     |       | 3     |       |       | 3     |       |
| Permitted Phases        | 6     |       | 2    |       | 3     |       | 3     | 3     |       | 3     |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 9.0   | 16.5  | 9.0  | 16.5  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  |
| Total Split (s)         | 13.0  | 65.0  | 9.0  | 61.0  | 36.0  | 36.0  | 36.0  | 36.0  | 36.0  | 36.0  |
| Total Split (%)         | 11.8% | 59.1% | 8.2% | 55.5% | 32.7% | 32.7% | 32.7% | 32.7% | 32.7% | 32.7% |
| Maximum Green (s)       | 8.0   | 58.5  | 4.0  | 54.5  | 30.0  | 30.0  | 30.0  | 30.0  | 30.0  | 30.0  |
| Yellow Time (s)         | 3.0   | 3.5   | 3.0  | 3.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0   | 3.0   | 2.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   | Lead | Lag   |       |       |       |       |       |       |
| Lead-Lag Optimize?      |       |       |      |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 4.0   | 2.0  | 4.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Minimum Gap (s)         | 2.0   | 3.0   | 2.0  | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | C-Max | None | C-Max | None  | None  | None  | None  | None  | None  |
| Walk Time (s)           |       |       |      |       | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |       |      |       | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  |
| Pedestrian Calls (#/hr) |       |       |      |       | 0     | 0     | 0     | 0     | 0     | 0     |
| 90th %ile Green (s)     | 7.7   | 68.2  | 5.6  | 66.1  | 18.7  | 18.7  | 18.7  | 18.7  | 18.7  | 18.7  |
| 90th %ile Term Code     | Gap   | Coord | Gap  | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |
| 70th %ile Green (s)     | 6.5   | 72.8  | 5.1  | 71.4  | 14.6  | 14.6  | 14.6  | 14.6  | 14.6  | 14.6  |
| 70th %ile Term Code     | Gap   | Coord | Gap  | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |
| 50th %ile Green (s)     | 5.9   | 75.3  | 4.8  | 74.2  | 12.4  | 12.4  | 12.4  | 12.4  | 12.4  | 12.4  |
| 50th %ile Term Code     | Gap   | Coord | Gap  | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |
| 30th %ile Green (s)     | 5.3   | 87.3  | 0.0  | 77.0  | 10.2  | 10.2  | 10.2  | 10.2  | 10.2  | 10.2  |
| 30th %ile Term Code     | Gap   | Coord | Skip | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |
| 10th %ile Green (s)     | 4.7   | 90.5  | 0.0  | 80.8  | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| 10th %ile Term Code     | Gap   | Coord | Skip | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 63 (57%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

2020 Market with Traffic Mitigation

23: Library Ln & Seminary Rd

AM PEAK

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT  | NBR   | SBL   | SBT  | SBR   |
|---------------------|-------|-------|------|-------|-------|------|-------|------|-------|-------|------|-------|
| Lane Configurations |       | ↑↑↑   |      | ↑     | ↑↑↑   |      | ↑     | ↑    | ↑     | ↑     | ↑    | ↑     |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12    |
| Grade (%)           |       | 0%    |      |       | 0%    |      |       | 0%   |       |       |      | 0%    |
| Storage Length (ft) | 150   |       | 0    | 100   |       | 0    | 150   |      | 150   | 150   |      | 150   |
| Storage Lanes       | 1     |       | 0    | 1     |       | 0    | 1     |      | 1     | 1     |      | 1     |
| Taper Length (ft)   | 50    |       |      | 50    |       |      | 50    |      | 50    |       |      | 50    |
| Lane Util. Factor   | 1.00  | 0.91  | 0.91 | 1.00  | 0.91  | 0.91 | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  |
| Ped Bike Factor     | 1.00  | 1.00  |      | 0.97  | 1.00  |      | 0.82  |      | 0.97  | 0.99  |      | 0.87  |
| Frt                 |       | 0.997 |      |       | 0.991 |      |       |      | 0.850 |       |      | 0.850 |
| Flt Protected       | 0.950 |       |      | 0.950 |       |      | 0.950 |      |       | 0.950 |      |       |
| Satd. Flow (prot)   | 1770  | 5058  | 0    | 1770  | 5033  | 0    | 1770  | 1863 | 1583  | 1770  | 1863 | 1583  |
| Flt Permitted       | 0.123 |       |      | 0.326 |       |      | 0.950 |      |       | 0.000 |      |       |
| Satd. Flow (perm)   | 229   | 5058  | 0    | 586   | 5033  | 0    | 1458  | 1863 | 1532  | 0     | 1863 | 1382  |
| Right Turn on Red   |       |       | Yes  |       |       | Yes  |       |      | Yes   |       |      | Yes   |
| Satd. Flow (RTOR)   |       | 3     |      |       | 9     |      |       |      | 16    |       |      | 482   |
| Link Speed (mph)    |       | 35    |      |       | 35    |      |       |      | 35    |       |      | 25    |
| Link Distance (ft)  |       | 277   |      |       | 464   |      |       |      | 777   |       |      | 520   |
| Travel Time (s)     |       | 5.4   |      |       | 9.0   |      |       |      | 15.1  |       |      | 14.2  |

Intersection Summary

Area Type: Other

Timings  
23: Library Ln & Seminary Rd

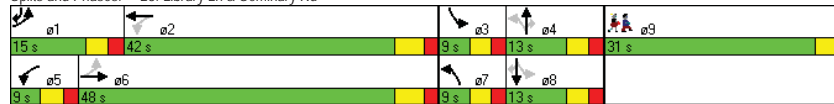
2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBR   | ø8   | ø9   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |      |      |
| Volume (vph)         | 200   | 760   | 20    | 1350  | 50    | 5     | 15    | 55    | 215   |      |      |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | pm+ov |      |      |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4     |       | 3     | 1     | 8    | 9    |
| Permitted Phases     | 6     |       | 2     |       | 4     |       | 4     | 8     | 8     |      |      |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4     | 4     | 3     | 1     |      |      |
| Switch Phase         |       |       |       |       |       |       |       |       |       |      |      |
| Minimum Initial (s)  | 7.0   | 30.0  | 4.0   | 30.0  | 4.0   | 8.0   | 8.0   | 4.0   | 7.0   | 8.0  | 4.0  |
| Minimum Split (s)    | 12.0  | 36.5  | 9.0   | 36.5  | 9.0   | 13.0  | 13.0  | 9.0   | 12.0  | 13.0 | 31.0 |
| Total Split (s)      | 15.0  | 48.0  | 9.0   | 42.0  | 9.0   | 13.0  | 13.0  | 9.0   | 15.0  | 13.0 | 31.0 |
| Total Split (%)      | 13.6% | 43.6% | 8.2%  | 38.2% | 8.2%  | 11.8% | 11.8% | 8.2%  | 13.6% | 12%  | 28%  |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0  |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0  | 0.0  |
| 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)  | 5.0   | 6.0   | 5.0   | 6.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |      |      |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lead  | Lag  |      |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |      |      |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  | None | None |
| Act Effct Green (s)  | 92.1  | 88.3  | 83.4  | 76.6  | 9.2   | 8.0   | 8.0   | 4.0   | 10.0  |      |      |
| Actuated g/C Ratio   | 0.84  | 0.80  | 0.76  | 0.70  | 0.08  | 0.07  | 0.07  | 0.04  | 0.09  |      |      |
| v/c Ratio            | 0.65  | 0.21  | 0.04  | 0.44  | 0.36  | 0.04  | 0.13  | 0.92  | 0.40  |      |      |
| Control Delay        | 18.6  | 8.7   | 1.0   | 2.2   | 51.8  | 48.2  | 23.3  | 146.3 | 2.0   |      |      |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.1   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      |      |
| Total Delay          | 18.6  | 8.7   | 1.0   | 2.3   | 51.8  | 48.2  | 23.3  | 146.3 | 2.0   |      |      |
| LOS                  | B     | A     | A     | A     | D     | D     | C     | F     | A     |      |      |
| Approach Delay       |       | 10.7  |       | 2.3   |       | 45.5  |       |       |       |      |      |
| Approach LOS         |       | B     |       | A     |       | D     |       |       |       |      |      |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 102 (93%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 105  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.92  
 Intersection Signal Delay: 9.2  
 Intersection LOS: A  
 Intersection Capacity Utilization 62.6%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 23: Library Ln & Seminary Rd



Phasings  
23: Library Ln & Seminary Rd

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group              | EBL   | EBT   | WBL  | WBT   | NBL  | NBT   | NBR   | SBL  | SBR   | ø8   | ø9   |
|-------------------------|-------|-------|------|-------|------|-------|-------|------|-------|------|------|
| Protected Phases        | 1     | 6     | 5    | 2     | 7    | 4     |       | 3    | 1     | 8    | 9    |
| Permitted Phases        | 6     |       | 2    |       | 4    |       | 4     | 8    | 8     |      |      |
| Minimum Initial (s)     | 7.0   | 30.0  | 4.0  | 30.0  | 4.0  | 8.0   | 8.0   | 4.0  | 7.0   | 8.0  | 4.0  |
| Minimum Split (s)       | 12.0  | 36.5  | 9.0  | 36.5  | 9.0  | 13.0  | 13.0  | 9.0  | 12.0  | 13.0 | 31.0 |
| Total Split (s)         | 15.0  | 48.0  | 9.0  | 42.0  | 9.0  | 13.0  | 13.0  | 9.0  | 15.0  | 13.0 | 31.0 |
| Total Split (%)         | 13.6% | 43.6% | 8.2% | 38.2% | 8.2% | 11.8% | 11.8% | 8.2% | 13.6% | 12%  | 28%  |
| Maximum Green (s)       | 10.0  | 42.0  | 4.0  | 36.0  | 4.0  | 8.0   | 8.0   | 4.0  | 10.0  | 8.0  | 28.0 |
| Yellow Time (s)         | 3.0   | 4.0   | 3.0  | 4.0   | 3.0  | 3.0   | 3.0   | 3.0  | 3.0   | 3.0  | 3.0  |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0  | 2.0   | 2.0  | 2.0   | 2.0   | 2.0  | 2.0   | 2.0  | 0.0  |
| Lead/Lag                | Lead  | Lag   | Lead | Lag   | Lead | Lag   | Lag   | Lead | Lead  | Lag  |      |
| Lead-Lag Optimize?      |       |       |      |       |      |       |       |      |       |      |      |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0  | 3.0   | 3.0   | 3.0  | 3.0   | 3.0  | 3.0  |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0  | 3.0   | 3.0  | 3.0   | 3.0   | 3.0  | 3.0   | 3.0  | 3.0  |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0  |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0  |
| Recall Mode             | None  | C-Max | None | C-Max | None | None  | None  | None | None  | None | None |
| Walk Time (s)           |       |       |      |       |      |       |       |      |       |      | 4.0  |
| Flash Dont Walk (s)     |       |       |      |       |      |       |       |      |       |      | 24.0 |
| Pedestrian Calls (#/hr) |       |       |      |       |      |       |       |      |       |      | 0    |
| 90th %ile Green (s)     | 10.0  | 70.7  | 6.3  | 67.0  | 17.0 | 8.0   | 8.0   | 4.0  | 10.0  | 0.0  | 0.0  |
| 90th %ile Term Code     | Max   | Coord | Gap  | Coord | Hold | Max   | Max   | Max  | Max   | Skip | Skip |
| 70th %ile Green (s)     | 10.0  | 71.0  | 6.0  | 67.0  | 17.0 | 8.0   | 8.0   | 4.0  | 10.0  | 0.0  | 0.0  |
| 70th %ile Term Code     | Max   | Coord | Gap  | Coord | Hold | Max   | Max   | Max  | Max   | Skip | Skip |
| 50th %ile Green (s)     | 10.0  | 95.0  | 0.0  | 80.0  | 4.0  | 0.0   | 0.0   | 4.0  | 10.0  | 0.0  | 0.0  |
| 50th %ile Term Code     | Max   | Coord | Skip | Coord | Max  | Skip  | Skip  | Max  | Max   | Skip | Skip |
| 30th %ile Green (s)     | 10.0  | 95.0  | 0.0  | 80.0  | 4.0  | 0.0   | 0.0   | 4.0  | 10.0  | 0.0  | 0.0  |
| 30th %ile Term Code     | Max   | Coord | Skip | Coord | Max  | Skip  | Skip  | Max  | Max   | Skip | Skip |
| 10th %ile Green (s)     | 10.0  | 104.0 | 0.0  | 89.0  | 0.0  | 0.0   | 0.0   | 0.0  | 10.0  | 0.0  | 0.0  |
| 10th %ile Term Code     | Max   | Coord | Skip | Coord | Skip | Skip  | Skip  | Skip | Max   | Skip | Skip |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 102 (93%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
 33: Seminary Rd (S)/Seminary Rd (N) & Seminary Rd  
 2020 Market with Traffic Mitigation  
 AM PEAK

| Lane Group          | EBL  | EBT  | EBR  | WBL  | WBT   | WBR   | NBL  | NBT  | NBR   | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|-------|-------|------|------|-------|------|------|------|
| Lane Configurations |      | ↑    |      |      | ↑↑    | ↑↑    |      |      | ↑↑    |      |      |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12   | 12   | 12    | 12    | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           |      | 0%   |      |      | 0%    |       |      | 0%   |       |      | 0%   |      |
| Storage Length (ft) | 0    |      | 0    | 0    |       | 0     | 0    |      | 0     | 0    |      | 0    |
| Storage Lanes       | 0    |      | 0    | 0    |       | 1     | 0    |      | 2     | 0    |      | 0    |
| Taper Length (ft)   | 50   |      |      | 50   |       |       | 50   |      |       | 50   |      |      |
| Lane Util. Factor   | 1.00 | 1.00 | 1.00 | 1.00 | 0.91  | 0.91  | 1.00 | 1.00 | 0.88  | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      |      |      | 0.967 | 0.850 |      |      | 0.850 |      |      |      |
| Frt                 |      |      |      |      |       |       |      |      |       |      |      |      |
| Flt Protected       |      |      |      |      |       |       |      |      |       |      |      |      |
| Satd. Flow (prot)   | 0    | 1863 | 0    | 0    | 3278  | 1441  | 0    | 0    | 2787  | 0    | 0    | 0    |
| Flt Permitted       |      |      |      |      |       |       |      |      |       |      |      |      |
| Satd. Flow (perm)   | 0    | 1863 | 0    | 0    | 3278  | 1441  | 0    | 0    | 2787  | 0    | 0    | 0    |
| Link Speed (mph)    |      | 35   |      |      | 35    |       |      |      | 35    |      |      | 30   |
| Link Distance (ft)  |      | 269  |      |      | 195   |       |      |      | 278   |      |      | 199  |
| Travel Time (s)     |      | 5.2  |      |      | 3.8   |       |      |      | 5.4   |      |      | 4.5  |

**Intersection Summary**  
 Area Type: Other

Lanes and Geometrics  
 41: Van Dorn St & Kenmore Ave S  
 2020 Market with Traffic Mitigation  
 AM PEAK

| Lane Group          | WBL   | WBR   | NBT   | NBR  | SBL  | SBT   |
|---------------------|-------|-------|-------|------|------|-------|
| Lane Configurations | ↑     | ↑     | ↑↑    |      |      | ↑↑    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900  | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12    | 12   | 12   | 12    |
| Grade (%)           | 0%    |       | 0%    |      |      | 0%    |
| Storage Length (ft) | 0     | 50    |       | 0    | 0    |       |
| Storage Lanes       | 1     | 1     |       | 0    | 0    |       |
| Taper Length (ft)   | 50    |       |       |      | 50   |       |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95  | 0.95 | 0.95 | 0.95  |
| Ped Bike Factor     |       | 0.99  | 1.00  |      |      |       |
| Frt                 |       | 0.850 | 0.992 |      |      |       |
| Flt Protected       | 0.950 |       |       |      |      | 0.999 |
| Satd. Flow (prot)   | 1770  | 1583  | 3503  | 0    | 0    | 3536  |
| Flt Permitted       | 0.950 |       |       |      |      | 0.795 |
| Satd. Flow (perm)   | 1770  | 1561  | 3503  | 0    | 0    | 2814  |
| Right Turn on Red   |       | Yes   |       | Yes  |      |       |
| Satd. Flow (RTOR)   |       | 15    | 13    |      |      |       |
| Link Speed (mph)    | 30    |       | 35    |      |      | 35    |
| Link Distance (ft)  | 908   |       | 2895  |      |      | 1898  |
| Travel Time (s)     | 20.6  |       | 56.4  |      |      | 37.0  |

**Intersection Summary**  
 Area Type: Other

**Timings**  
41: Van Dorn St & Kenmore Ave S

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | WBL   | WBR   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↕     | ↖ ↗   | ↖ ↗   |
| Volume (vph)         | 55    | 150   | 2265  | 10    | 425   |
| Turn Type            | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 2     |       | 1     |       | 1     |
| Permitted Phases     |       | 2     |       | 1     |       |
| Detector Phase       | 2     | 2     | 1     | 1     | 1     |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)    | 27.5  | 27.5  | 29.0  | 29.0  | 29.0  |
| Total Split (s)      | 27.5  | 27.5  | 122.5 | 122.5 | 122.5 |
| Total Split (%)      | 18.3% | 18.3% | 81.7% | 81.7% | 81.7% |
| Yellow Time (s)      | 3.5   | 3.5   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.5   | 5.5   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             | Lag   | Lag   | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?   |       |       |       |       |       |
| Recall Mode          | None  | None  | C-Max | C-Max | C-Max |
| Act Effct Green (s)  | 18.9  | 18.9  | 119.6 |       | 119.6 |
| Actuated g/C Ratio   | 0.13  | 0.13  | 0.80  |       | 0.80  |
| v/c Ratio            | 0.26  | 0.77  | 0.92  |       | 0.21  |
| Control Delay        | 61.1  | 80.4  | 31.6  |       | 4.2   |
| Queue Delay          | 0.0   | 0.0   | 0.0   |       | 0.0   |
| Total Delay          | 61.1  | 80.4  | 31.6  |       | 4.2   |
| LOS                  | E     | F     | C     |       | A     |
| Approach Delay       | 75.3  |       | 31.6  |       | 4.2   |
| Approach LOS         | E     |       | C     |       | A     |

**Intersection Summary**

Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 55 (37%), Referenced to phase 1:NBSB, Start of Green  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.92  
 Intersection Signal Delay: 30.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 86.2%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 41: Van Dorn St & Kenmore Ave S



**Phasings**  
41: Van Dorn St & Kenmore Ave S

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group              | WBL   | WBR   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|
| Protected Phases        | 2     |       | 1     |       | 1     |
| Permitted Phases        |       | 2     |       | 1     |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 27.5  | 27.5  | 29.0  | 29.0  | 29.0  |
| Total Split (s)         | 27.5  | 27.5  | 122.5 | 122.5 | 122.5 |
| Total Split (%)         | 18.3% | 18.3% | 81.7% | 81.7% | 81.7% |
| Maximum Green (s)       | 22.0  | 22.0  | 116.5 | 116.5 | 116.5 |
| Yellow Time (s)         | 3.5   | 3.5   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lag   | Lag   | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?      |       |       |       |       |       |
| Vehicle Extension (s)   | 4.0   | 4.0   | 0.2   | 0.2   | 0.2   |
| Minimum Gap (s)         | 4.0   | 4.0   | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | C-Max | C-Max | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     | 15.0  | 15.0  | 16.0  | 16.0  | 16.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     |
| 90th %ile Green (s)     | 22.0  | 22.0  | 116.5 | 116.5 | 116.5 |
| 90th %ile Term Code     | Max   | Max   | Coord | Coord | Coord |
| 70th %ile Green (s)     | 22.0  | 22.0  | 116.5 | 116.5 | 116.5 |
| 70th %ile Term Code     | Max   | Max   | Coord | Coord | Coord |
| 50th %ile Green (s)     | 20.3  | 20.3  | 118.2 | 118.2 | 118.2 |
| 50th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord |
| 30th %ile Green (s)     | 17.3  | 17.3  | 121.2 | 121.2 | 121.2 |
| 30th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord |
| 10th %ile Green (s)     | 12.8  | 12.8  | 125.7 | 125.7 | 125.7 |
| 10th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord |

**Intersection Summary**

Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 55 (37%), Referenced to phase 1:NBSB, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics 2020 Market with Traffic Mitigation  
AM PEAK  
42: Van Dorn St & Sanger Ave/Richenbacher Ave

| Lane Group          | EBL  | EBT   | EBR   | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|---------------------|------|-------|-------|-------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations |      |       |       |       |       |      |       |       |      |       |       |      |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12    | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           |      | 0%    |       |       | 0%    |      |       | 0%    |      |       | 0%    |      |
| Storage Length (ft) | 150  |       | 0     | 0     |       | 150  | 390   |       | 0    | 140   |       | 0    |
| Storage Lanes       | 0    |       | 1     | 1     |       | 1    | 1     |       | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50   |       |       | 50    |       |      | 50    |       |      | 50    |       |      |
| Lane Util. Factor   | 1.00 | 0.95  | 0.95  | 1.00  | 1.00  | 1.00 | 1.00  | 0.95  | 0.95 | 1.00  | 0.95  | 0.95 |
| Ped Bike Factor     |      | 0.99  | 0.96  |       | 0.98  |      |       | 1.00  |      |       | 1.00  |      |
| Frt                 |      | 0.980 | 0.850 |       | 0.916 |      |       | 0.999 |      |       | 0.986 |      |
| Flt Protected       |      | 0.971 |       | 0.950 |       |      | 0.950 |       |      | 0.950 |       |      |
| Satd. Flow (prot)   | 0    | 1674  | 1504  | 1770  | 1669  | 0    | 1770  | 3535  | 0    | 1770  | 3485  | 0    |
| Flt Permitted       |      | 0.971 |       | 0.950 |       |      | 0.493 |       |      | 0.058 |       |      |
| Satd. Flow (perm)   | 0    | 1674  | 1439  | 1770  | 1669  | 0    | 918   | 3535  | 0    | 108   | 3485  | 0    |
| Right Turn on Red   |      |       | No    |       |       | Yes  |       |       | Yes  |       |       | Yes  |
| Satd. Flow (RTOR)   |      |       |       |       | 35    |      |       | 1     |      |       | 8     |      |
| Link Speed (mph)    |      | 25    |       |       | 25    |      |       | 35    |      |       | 35    |      |
| Link Distance (ft)  |      | 517   |       |       | 1172  |      |       | 801   |      |       | 2895  |      |
| Travel Time (s)     |      | 14.1  |       |       | 32.0  |      |       | 15.6  |      |       | 56.4  |      |

Intersection Summary

Area Type: Other

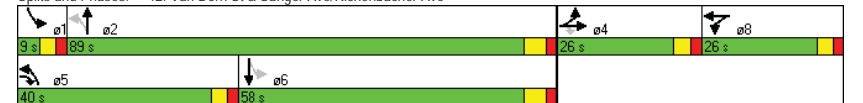
Timings 2020 Market with Traffic Mitigation  
AM PEAK  
42: Van Dorn St & Sanger Ave/Richenbacher Ave

| Lane Group           | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |
| Volume (vph)         | 50    | 190   | 15    | 55    | 430   | 1870  | 15    | 280   |
| Turn Type            | NA    | pm+ov | Split | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 4     | 5     | 8     | 8     | 5     | 2     | 1     | 6     |
| Permitted Phases     |       | 4     |       |       | 2     |       | 6     |       |
| Detector Phase       | 4     | 5     | 8     | 8     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 26.0  | 9.0   | 26.0  | 26.0  | 9.0   | 27.0  | 9.0   | 27.0  |
| Total Split (s)      | 26.0  | 40.0  | 26.0  | 26.0  | 40.0  | 89.0  | 9.0   | 58.0  |
| Total Split (%)      | 17.3% | 26.7% | 17.3% | 17.3% | 26.7% | 59.3% | 6.0%  | 38.7% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       | Lead  |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  | 20.2  | 45.0  | 15.2  | 15.2  | 99.6  | 95.0  | 74.9  | 68.8  |
| Actuated g/C Ratio   | 0.13  | 0.30  | 0.10  | 0.10  | 0.66  | 0.63  | 0.50  | 0.46  |
| v/c Ratio            | 0.88  | 0.40  | 0.09  | 0.67  | 0.62  | 0.91  | 0.15  | 0.21  |
| Control Delay        | 99.4  | 27.9  | 58.9  | 62.7  | 18.2  | 30.1  | 21.7  | 26.5  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 7.0   | 0.0   | 0.0   |
| Total Delay          | 99.4  | 27.9  | 58.9  | 62.7  | 18.2  | 37.2  | 21.7  | 26.5  |
| LOS                  | F     | C     | E     | E     | B     | D     | C     | C     |
| Approach Delay       | 65.7  |       |       | 62.3  |       | 33.7  |       | 26.3  |
| Approach LOS         | E     |       |       | E     |       | C     |       | C     |

Intersection Summary

Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.91  
 Intersection Signal Delay: 37.8  
 Intersection LOS: D  
 Intersection Capacity Utilization 99.1%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 42: Van Dorn St & Sanger Ave/Richenbacher Ave



Phasings

2020 Market with Traffic Mitigation

42: Van Dorn St & Sanger Ave/Richenbacher Ave

AM PEAK

|                         | →     | ↘     | ↙     | ←     | ↖     | ↗     | ↘    | ↓     |
|-------------------------|-------|-------|-------|-------|-------|-------|------|-------|
| Lane Group              | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL  | SBT   |
| Protected Phases        | 4     | 5     | 8     | 8     | 5     | 2     | 1    | 6     |
| Permitted Phases        | 4     |       |       |       |       |       |      |       |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 10.0  | 4.0  | 10.0  |
| Minimum Split (s)       | 26.0  | 9.0   | 26.0  | 26.0  | 9.0   | 27.0  | 9.0  | 27.0  |
| Total Split (s)         | 26.0  | 40.0  | 26.0  | 26.0  | 40.0  | 89.0  | 9.0  | 58.0  |
| Total Split (%)         | 17.3% | 26.7% | 17.3% | 17.3% | 26.7% | 59.3% | 6.0% | 38.7% |
| Maximum Green (s)       | 21.0  | 35.0  | 21.0  | 21.0  | 35.0  | 83.0  | 4.0  | 52.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0  | 2.0   |
| Lead/Lag                | Lead  |       |       |       | Lead  | Lag   | Lead | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |      |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 0.2   | 3.0  | 0.2   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 0.2   | 3.0  | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | C-Max | None | C-Max |
| Walk Time (s)           | 7.0   |       | 7.0   | 7.0   |       | 7.0   |      | 7.0   |
| Flash Dont Walk (s)     | 14.0  |       | 14.0  | 14.0  |       | 14.0  |      | 14.0  |
| Pedestrian Calls (#/hr) | 10    |       | 10    | 10    |       | 10    |      | 10    |
| 90th %ile Green (s)     | 21.0  | 35.0  | 21.0  | 21.0  | 35.0  | 83.0  | 4.0  | 52.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Coord | Max  | Coord |
| 70th %ile Green (s)     | 21.0  | 30.1  | 21.0  | 21.0  | 30.1  | 83.0  | 4.0  | 56.9  |
| 70th %ile Term Code     | Max   | Gap   | Ped   | Ped   | Gap   | Coord | Max  | Coord |
| 50th %ile Green (s)     | 21.0  | 24.4  | 14.5  | 14.5  | 24.4  | 98.5  | 0.0  | 69.1  |
| 50th %ile Term Code     | Max   | Gap   | Gap   | Gap   | Gap   | Coord | Skip | Coord |
| 30th %ile Green (s)     | 21.0  | 19.8  | 11.8  | 11.8  | 19.8  | 101.2 | 0.0  | 76.4  |
| 30th %ile Term Code     | Max   | Gap   | Gap   | Gap   | Gap   | Coord | Skip | Coord |
| 10th %ile Green (s)     | 16.9  | 14.6  | 7.9   | 7.9   | 14.6  | 109.2 | 0.0  | 89.6  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Skip | Coord |

Intersection Summary

Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

2020 Market with Traffic Mitigation

43: Van Dorn St/ Van Dorn St & Braddock Rd

AM PEAK

|                     | ↖     | →    | ↘    | ↙     | ←     | ↖    | ↗     | ↘    | ↙     | ↓     | ↘    |      |
|---------------------|-------|------|------|-------|-------|------|-------|------|-------|-------|------|------|
| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL   | NBT  | NBR   | SBL   | SBT  | SBR  |
| Lane Configurations | ↖     | ↖↗   |      | ↖     | ↖↗    |      | ↖     | ↖↗   |       | ↖     | ↖↗   |      |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12   |
| Grade (%)           | 0%    |      |      |       | 0%    |      | 0%    |      | 0%    |       |      |      |
| Storage Length (ft) | 40    |      | 0    | 140   |       | 0    | 150   |      | 0     | 100   |      | 0    |
| Storage Lanes       | 1     |      | 0    | 1     |       | 0    | 1     |      | 0     | 1     |      | 0    |
| Taper Length (ft)   | 50    |      |      | 50    |       |      | 50    |      |       | 50    |      |      |
| Lane Util. Factor   | 1.00  | 0.95 | 0.95 | 1.00  | 0.95  | 0.95 | 1.00  | 0.95 | 0.95  | 1.00  | 0.95 | 0.95 |
| Ped Bike Factor     | 0.99  |      |      |       | 1.00  |      | 0.99  |      | 0.99  |       | 1.00 |      |
| Frt                 | 0.921 |      |      |       | 0.981 |      | 0.948 |      | 0.961 |       |      |      |
| Flt Protected       | 0.950 |      |      | 0.950 |       |      | 0.950 |      |       | 0.950 |      |      |
| Satd. Flow (prot)   | 1770  | 3225 | 0    | 1770  | 3463  | 0    | 1770  | 3336 | 0     | 1770  | 3388 | 0    |
| Flt Permitted       | 0.489 |      |      | 0.451 |       |      | 0.573 |      |       | 0.177 |      |      |
| Satd. Flow (perm)   | 911   | 3225 | 0    | 840   | 3463  | 0    | 1067  | 3336 | 0     | 330   | 3388 | 0    |
| Right Turn on Red   |       |      | Yes  |       |       |      | Yes   |      | Yes   |       |      |      |
| Satd. Flow (RTOR)   | 161   |      |      |       | 13    |      | 138   |      | 32    |       |      |      |
| Link Speed (mph)    | 35    |      |      |       | 35    |      | 35    |      | 35    |       |      |      |
| Link Distance (ft)  | 1126  |      |      |       | 1277  |      | 652   |      | 1512  |       |      |      |
| Travel Time (s)     | 21.9  |      |      |       | 24.9  |      | 12.7  |      | 29.5  |       |      |      |

Intersection Summary

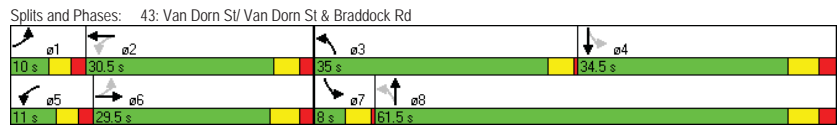
Area Type: Other



Timings 2020 Market with Traffic Mitigation  
 43: Van Dorn St/ Van Dorn St & Braddock Rd AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↖↗    | ↖     | ↖↗    | ↖     | ↖↗    | ↖     | ↖↗    |
| Volume (vph)         | 10    | 135   | 165   | 355   | 680   | 925   | 5     | 85    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 1     | 6     | 5     | 2     | 3     | 8     | 7     | 4     |
| Permitted Phases     | 6     |       | 2     |       | 8     |       | 4     |       |
| Detector Phase       | 1     | 6     | 5     | 2     | 3     | 8     | 7     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0  | 5.0   | 10.0  | 4.0   | 7.0   | 4.0   | 7.0   |
| Minimum Split (s)    | 10.0  | 29.0  | 10.0  | 28.5  | 8.0   | 34.5  | 8.0   | 34.5  |
| Total Split (s)      | 10.0  | 29.5  | 11.0  | 30.5  | 35.0  | 61.5  | 8.0   | 34.5  |
| Total Split (%)      | 9.1%  | 26.8% | 10.0% | 27.7% | 31.8% | 55.9% | 7.3%  | 31.4% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 3.5   | 3.5   | 4.0   | 3.5   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 0.5   | 2.5   | 0.5   | 2.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -5.0  | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.0   | 6.0   | 5.0   | 5.5   | 4.0   | 1.5   | 4.0   | 6.5   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | Min   | None  | C-Max | None  | Min   | None  | Min   |
| Act Effct Green (s)  | 38.1  | 32.1  | 43.3  | 41.6  | 56.9  | 57.8  | 25.9  | 19.4  |
| Actuated g/C Ratio   | 0.35  | 0.29  | 0.39  | 0.38  | 0.52  | 0.53  | 0.24  | 0.18  |
| v/c Ratio            | 0.03  | 0.29  | 0.46  | 0.33  | 0.97  | 0.84  | 0.04  | 0.20  |
| Control Delay        | 23.6  | 17.2  | 29.5  | 26.4  | 33.7  | 11.7  | 15.8  | 27.5  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.8   | 0.0   | 0.0   |
| Total Delay          | 23.6  | 17.2  | 29.5  | 26.4  | 33.7  | 12.5  | 15.8  | 27.5  |
| LOS                  | C     | B     | C     | C     | C     | B     | B     | C     |
| Approach Delay       |       | 17.4  |       | 27.3  |       | 19.4  |       | 27.0  |
| Approach LOS         |       | B     |       | C     |       | B     |       | C     |

**Intersection Summary**  
 Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 18 (16%), Referenced to phase 2:WBTL, Start of Green  
 Natural Cycle: 85  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.97  
 Intersection Signal Delay: 21.0 Intersection LOS: C  
 Intersection Capacity Utilization 79.8% ICU Level of Service D  
 Analysis Period (min) 15



Phasings 2020 Market with Traffic Mitigation  
 43: Van Dorn St/ Van Dorn St & Braddock Rd AM PEAK

| Lane Group              | EBL  | EBT   | WBL   | WBT   | NBL   | NBT   | SBL  | SBT   |
|-------------------------|------|-------|-------|-------|-------|-------|------|-------|
| Protected Phases        | 1    | 6     | 5     | 2     | 3     | 8     | 7    | 4     |
| Permitted Phases        | 6    |       | 2     |       | 8     |       | 4    |       |
| Minimum Initial (s)     | 5.0  | 10.0  | 5.0   | 10.0  | 4.0   | 7.0   | 4.0  | 7.0   |
| Minimum Split (s)       | 10.0 | 29.0  | 10.0  | 28.5  | 8.0   | 34.5  | 8.0  | 34.5  |
| Total Split (s)         | 10.0 | 29.5  | 11.0  | 30.5  | 35.0  | 61.5  | 8.0  | 34.5  |
| Total Split (%)         | 9.1% | 26.8% | 10.0% | 27.7% | 31.8% | 55.9% | 7.3% | 31.4% |
| Maximum Green (s)       | 5.0  | 23.5  | 6.0   | 25.0  | 31.0  | 55.0  | 4.0  | 28.0  |
| Yellow Time (s)         | 3.0  | 4.0   | 3.0   | 3.5   | 3.5   | 4.0   | 3.5  | 4.0   |
| All-Red Time (s)        | 2.0  | 2.0   | 2.0   | 2.0   | 0.5   | 2.5   | 0.5  | 2.5   |
| Lead/Lag                | Lead | Lag   | Lead  | Lag   | Lead  | Lag   | Lead | Lag   |
| Lead-Lag Optimize?      |      |       |       |       |       |       |      |       |
| Vehicle Extension (s)   | 3.0  | 0.2   | 3.0   | 0.2   | 3.0   | 2.0   | 3.0  | 2.0   |
| Minimum Gap (s)         | 0.2  | 0.2   | 0.2   | 0.2   | 3.0   | 0.2   | 3.0  | 0.2   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None | Min   | None  | C-Max | None  | Min   | None | Min   |
| Walk Time (s)           |      | 7.0   |       | 7.0   |       | 7.0   |      | 7.0   |
| Flash Dont Walk (s)     |      | 16.0  |       | 16.0  |       | 21.0  |      | 21.0  |
| Pedestrian Calls (#/hr) |      | 0     |       | 0     |       | 0     |      | 0     |
| 90th %ile Green (s)     | 5.0  | 23.5  | 6.0   | 25.0  | 31.0  | 55.0  | 4.0  | 28.0  |
| 90th %ile Term Code     | Max  | Coord | Max   | Coord | Max   | Max   | Max  | Hold  |
| 70th %ile Green (s)     | 0.0  | 31.5  | 6.0   | 43.0  | 31.0  | 55.0  | 0.0  | 20.0  |
| 70th %ile Term Code     | Skip | Coord | Max   | Coord | Max   | Max   | Skip | Hold  |
| 50th %ile Green (s)     | 0.0  | 31.6  | 6.0   | 43.1  | 31.0  | 54.9  | 0.0  | 19.9  |
| 50th %ile Term Code     | Skip | Coord | Max   | Coord | Max   | Gap   | Skip | Hold  |
| 30th %ile Green (s)     | 0.0  | 34.2  | 6.0   | 45.7  | 31.0  | 52.3  | 0.0  | 17.3  |
| 30th %ile Term Code     | Skip | Coord | Max   | Coord | Max   | Gap   | Skip | Hold  |
| 10th %ile Green (s)     | 0.0  | 39.8  | 6.0   | 51.3  | 31.0  | 46.7  | 0.0  | 11.7  |
| 10th %ile Term Code     | Skip | Coord | Max   | Coord | Max   | Gap   | Skip | Hold  |

**Intersection Summary**  
 Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 18 (16%), Referenced to phase 2:WBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

2020 Market with Traffic Mitigation  
AM PEAK

47: Van Dorn St/Van Dorn St & Taney Ave

| Lane Group          | WBL   | WBR   | NBT   | NBR  | SBL   | SBT  |
|---------------------|-------|-------|-------|------|-------|------|
| Lane Configurations | ↔     | ↔     | ↕     | ↔    | ↔     | ↕    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |       | 0%    |      |       | 0%   |
| Storage Length (ft) | 0     | 85    |       | 0    | 180   |      |
| Storage Lanes       | 1     | 1     |       | 0    | 1     |      |
| Taper Length (ft)   | 50    |       |       |      | 50    |      |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95  | 0.95 | 1.00  | 0.95 |
| Ped Bike Factor     |       | 0.99  | 1.00  |      |       |      |
| Frt                 |       | 0.850 | 0.991 |      |       |      |
| Flt Protected       | 0.950 |       |       |      | 0.950 |      |
| Satd. Flow (prot)   | 1770  | 1583  | 3501  | 0    | 1770  | 3539 |
| Flt Permitted       | 0.950 |       |       |      | 0.950 |      |
| Satd. Flow (perm)   | 1770  | 1561  | 3501  | 0    | 1770  | 3539 |
| Right Turn on Red   |       | Yes   |       | Yes  |       |      |
| Satd. Flow (RTOR)   |       | 51    | 12    |      |       |      |
| Link Speed (mph)    | 25    |       | 35    |      |       | 35   |
| Link Distance (ft)  | 1013  |       | 910   |      |       | 801  |
| Travel Time (s)     | 27.6  |       | 17.7  |      |       | 15.6 |

Intersection Summary

Area Type: Other

Timings

2020 Market with Traffic Mitigation  
AM PEAK

47: Van Dorn St/Van Dorn St & Taney Ave

| Lane Group           | WBL   | WBR   | NBT   | SBL  | SBT   |
|----------------------|-------|-------|-------|------|-------|
| Lane Configurations  | ↔     | ↔     | ↕     | ↔    | ↕     |
| Volume (vph)         | 135   | 80    | 2235  | 35   | 450   |
| Turn Type            | NA    | Perm  | NA    | Prot | NA    |
| Protected Phases     | 2     |       | 1     | 3    | 1 3   |
| Permitted Phases     |       | 2     |       |      |       |
| Detector Phase       | 2     | 2     | 1     | 3    | 1 3   |
| Switch Phase         |       |       |       |      |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 10.0  | 4.0  |       |
| Minimum Split (s)    | 25.0  | 25.0  | 16.0  | 9.0  |       |
| Total Split (s)      | 25.0  | 25.0  | 116.0 | 9.0  | 125.0 |
| Total Split (%)      | 16.7% | 16.7% | 77.3% | 6.0% | 83.3% |
| Yellow Time (s)      | 3.0   | 3.0   | 4.0   | 3.0  |       |
| All-Red Time (s)     | 3.0   | 3.0   | 2.0   | 2.0  |       |
| Lost Time Adjust (s) | -3.0  | -3.0  | -3.0  | -2.0 | -3.0  |
| Total Lost Time (s)  | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   |
| Lead/Lag             | Lag   | Lag   | Lead  |      |       |
| Lead-Lag Optimize?   |       |       |       |      |       |
| Recall Mode          | None  | None  | C-Max | None |       |
| Act Effct Green (s)  | 18.8  | 18.8  | 114.5 | 7.7  | 125.2 |
| Actuated g/C Ratio   | 0.13  | 0.13  | 0.76  | 0.05 | 0.83  |
| v/c Ratio            | 0.65  | 0.36  | 0.95  | 0.42 | 0.16  |
| Control Delay        | 76.3  | 30.8  | 25.6  | 93.1 | 0.9   |
| Queue Delay          | 0.0   | 0.0   | 11.6  | 0.0  | 0.0   |
| Total Delay          | 76.3  | 30.8  | 37.2  | 93.1 | 0.9   |
| LOS                  | E     | C     | D     | F    | A     |
| Approach Delay       | 59.3  |       | 37.2  |      | 7.6   |
| Approach LOS         | E     |       | D     |      | A     |

Intersection Summary

Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 97 (65%), Referenced to phase 1:NBSB, Start of Yellow  
 Natural Cycle: 130  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.95  
 Intersection Signal Delay: 34.1  
 Intersection Capacity Utilization 80.6%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service D

Splits and Phases: 47: Van Dorn St/Van Dorn St & Taney Ave



Phasings

2020 Market with Traffic Mitigation  
AM PEAK

47: Van Dorn St/Van Dorn St & Taney Ave

| Lane Group              | WBL   | WBR   | NBT   | SBL  | SBT   |
|-------------------------|-------|-------|-------|------|-------|
| Protected Phases        | 2     |       | 1     | 3    | 1 3   |
| Permitted Phases        | 2     |       |       |      |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 10.0  | 4.0  |       |
| Minimum Split (s)       | 25.0  | 25.0  | 16.0  | 9.0  |       |
| Total Split (s)         | 25.0  | 25.0  | 116.0 | 9.0  | 125.0 |
| Total Split (%)         | 16.7% | 16.7% | 77.3% | 6.0% | 83.3% |
| Maximum Green (s)       | 19.0  | 19.0  | 110.0 | 4.0  |       |
| Yellow Time (s)         | 3.0   | 3.0   | 4.0   | 3.0  |       |
| All-Red Time (s)        | 3.0   | 3.0   | 2.0   | 2.0  |       |
| Lead/Lag                | Lag   | Lag   | Lead  |      |       |
| Lead-Lag Optimize?      |       |       |       |      |       |
| Vehicle Extension (s)   | 2.0   | 2.0   | 0.2   | 2.0  |       |
| Minimum Gap (s)         | 2.0   | 2.0   | 0.2   | 2.0  |       |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0  |       |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0  |       |
| Recall Mode             | None  | None  | C-Max | None |       |
| Walk Time (s)           | 4.0   | 4.0   |       |      |       |
| Flash Dont Walk (s)     | 15.0  | 15.0  |       |      |       |
| Pedestrian Calls (#/hr) | 0     | 0     |       |      |       |
| 90th %ile Green (s)     | 19.0  | 19.0  | 110.0 | 4.0  |       |
| 90th %ile Term Code     | Max   | Max   | Coord | Max  |       |
| 70th %ile Green (s)     | 19.0  | 19.0  | 110.0 | 4.0  |       |
| 70th %ile Term Code     | Max   | Max   | Coord | Max  |       |
| 50th %ile Green (s)     | 16.6  | 16.6  | 110.0 | 6.4  |       |
| 50th %ile Term Code     | Gap   | Gap   | Coord | Max  |       |
| 30th %ile Green (s)     | 14.0  | 14.0  | 111.4 | 7.6  |       |
| 30th %ile Term Code     | Gap   | Gap   | Coord | Gap  |       |
| 10th %ile Green (s)     | 10.2  | 10.2  | 116.3 | 6.5  |       |
| 10th %ile Term Code     | Gap   | Gap   | Coord | Gap  |       |

Intersection Summary

Cycle Length: 150  
 Actuated Cycle Length: 150  
 Offset: 97 (65%), Referenced to phase 1:NBSB, Start of Yellow  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

2020 Market with Traffic Mitigation  
AM PEAK

51: Beauregard St & New Sanger Ave

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT  | WBR  | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|------|-------|-------|------|------|-------|------|-------|-------|-------|------|
| Lane Configurations | ↔     | ↕    | ↔     | ↔     | ↕    | ↔    | ↔     | ↕    | ↔     | ↔     | ↕     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12   | 12   | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           | 0%    |      | 0%    |       | 0%   |      | 0%    |      | 0%    |       | 0%    |      |
| Storage Length (ft) | 150   |      | 200   | 200   |      | 0    | 150   |      | 0     | 175   |       | 0    |
| Storage Lanes       | 1     |      | 1     | 1     |      | 1    | 1     |      | 0     | 1     |       | 0    |
| Taper Length (ft)   | 50    |      |       | 50    |      |      | 50    |      |       | 50    |       |      |
| 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     |       |      | 0.850 |       |      |      | 0.850 |      | 0.985 |       | 0.974 |      |
| Flt Protected       | 0.950 |      |       | 0.950 |      |      | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (prot)   | 1770  | 1863 | 1583  | 1770  | 1863 | 1583 | 1770  | 3486 | 0     | 1770  | 3447  | 0    |
| Flt Permitted       | 0.711 |      |       | 0.541 |      |      | 0.499 |      |       | 0.073 |       |      |
| Satd. Flow (perm)   | 1324  | 1863 | 1583  | 1008  | 1863 | 1583 | 930   | 3486 | 0     | 136   | 3447  | 0    |
| Right Turn on Red   |       |      | Yes   |       |      | Yes  |       |      | Yes   |       |       | Yes  |
| Satd. Flow (RTOR)   |       |      | 102   |       |      | 78   |       | 12   |       |       | 31    |      |
| Link Speed (mph)    |       | 25   |       |       | 25   |      |       | 35   |       |       | 35    |      |
| Link Distance (ft)  |       | 643  |       |       | 940  |      |       | 397  |       |       | 531   |      |
| Travel Time (s)     |       | 17.5 |       |       | 25.6 |      |       | 7.7  |       |       | 10.3  |      |

Intersection Summary

Area Type: Other

**Timings**  
**51: Beauregard St & New Sanger Ave**

2020 Market with Traffic Mitigation  
 AM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↑     | ↘     | ↙     | ↑     | ↘     | ↙     | ↔     | ↘     | ↙     |
| Volume (vph)         | 110   | 100   | 95    | 105   | 65    | 345   | 90    | 1205  | 115   | 335   |
| Turn Type            | pm+pt | NA    | Perm  | pm+pt | NA    | pm+ov | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     | 1     | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 4     | 8     |       | 8     | 2     |       | 6     |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 1     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 9.0   | 27.0  | 27.0  | 20.0  | 27.0  | 11.0  | 9.0   | 27.0  | 11.0  | 27.0  |
| Total Split (s)      | 13.0  | 27.0  | 27.0  | 20.0  | 34.0  | 24.0  | 9.0   | 69.0  | 24.0  | 84.0  |
| Total Split (%)      | 9.3%  | 19.3% | 19.3% | 14.3% | 24.3% | 17.1% | 6.4%  | 49.3% | 17.1% | 60.0% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 3.0   | 3.0   | 2.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -5.0  | -5.0  | 0.0   | -5.0  |
| Total Lost Time (s)  | 5.0   | 6.0   | 6.0   | 5.0   | 6.0   | 5.0   | 0.0   | 1.0   | 5.0   | 1.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max |       |
| Act Effct Green (s)  | 23.6  | 13.4  | 13.4  | 28.6  | 17.4  | 37.0  | 94.0  | 80.9  | 98.1  | 90.0  |
| Actuated g/C Ratio   | 0.17  | 0.10  | 0.10  | 0.20  | 0.12  | 0.26  | 0.67  | 0.58  | 0.70  | 0.64  |
| v/c Ratio            | 0.46  | 0.60  | 0.42  | 0.41  | 0.30  | 0.78  | 0.14  | 0.71  | 0.44  | 0.20  |
| Control Delay        | 51.0  | 74.3  | 15.3  | 48.7  | 56.7  | 47.9  | 3.9   | 19.3  | 26.5  | 10.4  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 51.0  | 74.3  | 15.3  | 48.7  | 56.7  | 47.9  | 3.9   | 19.3  | 26.5  | 10.4  |
| LOS                  | D     | E     | B     | D     | E     | D     | A     | B     | C     | B     |
| Approach Delay       |       | 47.6  |       |       | 49.2  |       |       | 18.3  |       | 14.0  |
| Approach LOS         |       | D     |       |       | D     |       |       | B     |       | B     |

**Intersection Summary**  
 Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 129 (92%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 95  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.78  
 Intersection Signal Delay: 26.5  
 Intersection LOS: C  
 Intersection Capacity Utilization 76.7%  
 ICU Level of Service D  
 Analysis Period (min) 15



**Phasings**  
**51: Beauregard St & New Sanger Ave**

2020 Market with Traffic Mitigation  
 AM PEAK

| Lane Group              | EBL  | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | SBL   | SBT   |
|-------------------------|------|-------|-------|-------|-------|-------|------|-------|-------|-------|
| Protected Phases        | 7    | 4     |       | 3     | 8     | 1     | 5    | 2     | 1     | 6     |
| Permitted Phases        | 4    |       | 4     | 8     |       | 8     | 2    |       | 6     |       |
| Minimum Initial (s)     | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0  | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 9.0  | 27.0  | 27.0  | 20.0  | 27.0  | 11.0  | 9.0  | 27.0  | 11.0  | 27.0  |
| Total Split (s)         | 13.0 | 27.0  | 27.0  | 20.0  | 34.0  | 24.0  | 9.0  | 69.0  | 24.0  | 84.0  |
| Total Split (%)         | 9.3% | 19.3% | 19.3% | 14.3% | 24.3% | 17.1% | 6.4% | 49.3% | 17.1% | 60.0% |
| Maximum Green (s)       | 8.0  | 21.0  | 21.0  | 15.0  | 28.0  | 19.0  | 4.0  | 63.0  | 19.0  | 78.0  |
| Yellow Time (s)         | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 2.0  | 3.0   | 3.0   | 2.0   | 3.0   | 2.0   | 2.0  | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead | Lag   | Lag   | Lead  | Lag   | Lead  | Lead | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |      |       |       |       |       |       |      |       |       |       |
| Vehicle Extension (s)   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 4.0   | 3.0   | 4.0   |
| Minimum Gap (s)         | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | None  | None  | None  | None  | None  | None | C-Max | None  | C-Max |
| Walk Time (s)           | 7.0  | 7.0   |       | 7.0   |       |       | 7.0  |       | 7.0   |       |
| Flash Dont Walk (s)     | 14.0 | 14.0  |       | 14.0  |       |       | 14.0 |       | 14.0  |       |
| Pedestrian Calls (#/hr) | 0    | 0     |       | 0     |       |       | 0    |       | 0     |       |
| 90th %ile Green (s)     | 8.0  | 18.4  | 18.4  | 15.0  | 25.4  | 17.7  | 6.6  | 66.9  | 17.7  | 78.0  |
| 90th %ile Term Code     | Max  | Gap   | Gap   | Max   | Hold  | Gap   | Max  | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 8.0  | 15.5  | 15.5  | 14.5  | 22.0  | 14.3  | 8.5  | 73.7  | 14.3  | 79.5  |
| 70th %ile Term Code     | Max  | Gap   | Gap   | Gap   | Hold  | Gap   | Gap  | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 8.0  | 13.4  | 13.4  | 12.9  | 18.3  | 13.6  | 7.6  | 78.1  | 13.6  | 84.1  |
| 50th %ile Term Code     | Max  | Gap   | Gap   | Gap   | Hold  | Gap   | Gap  | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 8.0  | 11.4  | 11.4  | 11.1  | 14.5  | 12.8  | 6.8  | 82.7  | 12.8  | 88.7  |
| 30th %ile Term Code     | Max  | Gap   | Gap   | Gap   | Hold  | Gap   | Gap  | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 23.3 | 8.4   | 8.4   | 8.9   | 0.0   | 22.6  | 6.0  | 78.1  | 22.6  | 94.7  |
| 10th %ile Term Code     | Hold | Gap   | Gap   | Gap   | Skip  | Gap   | Gap  | Coord | Gap   | Coord |

**Intersection Summary**  
 Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 129 (92%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
52: Beauregard St & Rayburn Ave

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT   | WBR   | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|---------------------|------|-------|-------|------|-------|-------|-------|-------|------|-------|-------|------|
| Lane Configurations |      | ↗     | ↘     |      | ↖     | ↗     | ↖     | ↗     | ↘    | ↖     | ↗     | ↘    |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           |      | 0%    |       |      | 0%    |       |       | 0%    |      |       | 0%    |      |
| Storage Length (ft) | 0    |       | 100   | 0    |       | 150   | 190   |       | 0    | 175   |       | 0    |
| Storage Lanes       | 0    |       | 1     | 0    |       | 1     | 1     |       | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50   |       |       | 50   |       |       | 50    |       |      | 50    |       |      |
| 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     |      |       |       |      | 0.99  | 0.96  |       | 1.00  |      |       | 0.99  |      |
| Frt                 |      |       | 0.850 |      |       | 0.850 |       | 0.994 |      |       | 0.944 |      |
| Flt Protected       |      | 0.955 |       |      | 0.963 |       | 0.950 |       |      | 0.950 |       |      |
| Satd. Flow (prot)   | 0    | 1779  | 1583  | 0    | 1794  | 1583  | 1770  | 3504  | 0    | 1770  | 3311  | 0    |
| Flt Permitted       |      | 0.721 |       |      | 0.698 |       | 0.331 |       |      | 0.052 |       |      |
| Satd. Flow (perm)   | 0    | 1343  | 1583  | 0    | 1282  | 1520  | 617   | 3504  | 0    | 97    | 3311  | 0    |
| Right Turn on Red   |      |       | Yes   |      |       | Yes   |       |       | Yes  |       |       | Yes  |
| Satd. Flow (RTOR)   |      |       | 36    |      |       | 38    |       | 4     |      |       | 130   |      |
| Link Speed (mph)    |      | 25    |       |      | 25    |       |       | 35    |      |       | 35    |      |
| Link Distance (ft)  |      | 354   |       |      | 559   |       |       | 713   |      |       | 718   |      |
| Travel Time (s)     |      | 9.7   |       |      | 15.2  |       |       | 13.9  |      |       | 14.0  |      |

Intersection Summary

Area Type: Other

Timings  
52: Beauregard St & Rayburn Ave

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       | ↗     | ↘     |       | ↖     | ↗     | ↖     | ↗     | ↘     | ↖     |
| Volume (vph)         | 300   | 15    | 60    | 15    | 5     | 35    | 125   | 1580  | 15    | 385   |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | Perm  | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     |       | 4     |       |       | 4     |       | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 4     | 4     |       | 4     | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 9.0   | 22.0  | 9.0   | 22.0  |
| Total Split (s)      | 48.6  | 48.6  | 48.6  | 48.6  | 48.6  | 48.6  | 13.0  | 82.4  | 9.0   | 78.4  |
| Total Split (%)      | 34.7% | 34.7% | 34.7% | 34.7% | 34.7% | 34.7% | 9.3%  | 58.9% | 6.4%  | 56.0% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  | 38.9  | 38.9  |       | 38.9  | 38.9  | 90.2  | 86.0  | 82.4  | 76.5  |       |
| Actuated g/C Ratio   | 0.28  | 0.28  |       | 0.28  | 0.28  | 0.64  | 0.61  | 0.59  | 0.55  |       |
| v/c Ratio            | 0.91  | 0.14  |       | 0.06  | 0.08  | 0.29  | 0.82  | 0.14  | 0.35  |       |
| Control Delay        | 76.7  | 18.8  |       | 35.4  | 10.4  | 8.8   | 15.0  | 10.9  | 2.8   |       |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.2   | 0.0   | 0.0   |       |
| Total Delay          | 76.7  | 18.8  |       | 35.4  | 10.4  | 8.8   | 15.2  | 10.9  | 2.8   |       |
| LOS                  | E     | B     |       | D     | B     | A     | B     | B     | A     |       |
| Approach Delay       | 67.4  |       |       | 19.3  |       |       | 14.8  |       | 3.0   |       |
| Approach LOS         | E     |       |       | B     |       |       | B     |       | A     |       |

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 1 (1%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.91  
 Intersection Signal Delay: 19.2  
 Intersection LOS: B  
 Intersection Capacity Utilization 88.5%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 52: Beauregard St & Rayburn Ave



Phasings  
52: Beauregard St & Rayburn Ave

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 4     |       |       | 4     |       | 5     | 2     | 1     | 6     |
| Permitted Phases        | 4     |       | 4     | 4     |       | 4     | 2     |       | 6     |       |
| Minimum Initial (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)       | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 9.0   | 22.0  | 9.0   | 22.0  |
| Total Split (s)         | 48.6  | 48.6  | 48.6  | 48.6  | 48.6  | 48.6  | 13.0  | 82.4  | 9.0   | 78.4  |
| Total Split (%)         | 34.7% | 34.7% | 34.7% | 34.7% | 34.7% | 34.7% | 9.3%  | 58.9% | 6.4%  | 56.0% |
| Maximum Green (s)       | 43.1  | 43.1  | 43.1  | 43.1  | 43.1  | 43.1  | 8.0   | 76.4  | 4.0   | 72.4  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 0.2   | 3.0   | 0.2   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 0.2   | 3.0   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Walk Time (s)           | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |       | 4.0   |       | 4.0   |
| Flash Dont Walk (s)     | 18.0  | 18.0  | 18.0  | 18.0  | 18.0  | 18.0  |       | 12.0  |       | 12.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     | 0     |       | 0     |       | 0     |
| 90th %ile Green (s)     | 43.1  | 43.1  | 43.1  | 43.1  | 43.1  | 43.1  | 8.0   | 76.4  | 4.0   | 72.4  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Max   | Coord | Max   | Coord |
| 70th %ile Green (s)     | 43.1  | 43.1  | 43.1  | 43.1  | 43.1  | 43.1  | 8.0   | 76.4  | 4.0   | 72.4  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Max   | Coord | Max   | Coord |
| 50th %ile Green (s)     | 42.1  | 42.1  | 42.1  | 42.1  | 42.1  | 42.1  | 9.0   | 86.4  | 0.0   | 72.4  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Max   | Coord | Skip  | Coord |
| 30th %ile Green (s)     | 36.8  | 36.8  | 36.8  | 36.8  | 36.8  | 36.8  | 8.4   | 91.7  | 0.0   | 78.3  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Skip  | Coord |       |
| 10th %ile Green (s)     | 29.5  | 29.5  | 29.5  | 29.5  | 29.5  | 29.5  | 6.8   | 99.0  | 0.0   | 87.2  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Coord | Skip  | Coord |       |

Intersection Summary

|  |
|--|
| Cycle Length: 140  |
| Actuated Cycle Length: 140   |
| Offset: 1 (1%), Referenced to phase 2:NBT and 6:SBTL, Start of Green |
| Control Type: Actuated-Coordinated                                   |

Lanes and Geometrics  
53: Beauregard St & Reading Ave

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|---------------------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations |       |       |      |       |       |      |       |       |      |       |       |      |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           |       | 0%    |      |       |       | 0%   |       |       | 0%   |       |       | 0%   |
| Storage Length (ft) | 0     |       | 100  | 0     |       | 150  | 165   |       | 0    | 175   |       | 0    |
| Storage Lanes       | 1     |       | 0    | 1     |       | 0    | 1     |       | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50    |       |      | 50    |       |      | 50    |       |      | 50    |       |      |
| 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     | 0.97  |       |      |       | 0.98  |      |       | 1.00  |      |       | 1.00  |      |
| Frt                 |       | 0.859 |      |       | 0.870 |      |       | 0.999 |      |       | 0.993 |      |
| Flt Protected       | 0.950 |       |      | 0.950 |       |      | 0.950 |       |      | 0.950 |       |      |
| Satd. Flow (prot)   | 1770  | 1560  | 0    | 1770  | 1588  | 0    | 1770  | 3534  | 0    | 1770  | 3499  | 0    |
| Flt Permitted       | 0.704 |       |      | 0.701 |       |      | 0.454 |       |      | 0.094 |       |      |
| Satd. Flow (perm)   | 1311  | 1560  | 0    | 1306  | 1588  | 0    | 846   | 3534  | 0    | 175   | 3499  | 0    |
| Right Turn on Red   |       |       | Yes  |       |       | Yes  |       |       | Yes  |       |       | Yes  |
| Satd. Flow (RTOR)   |       | 81    |      |       | 70    |      |       | 1     |      |       | 6     |      |
| Link Speed (mph)    |       | 25    |      |       | 25    |      |       | 35    |      |       | 35    |      |
| Link Distance (ft)  |       | 602   |      |       | 584   |      |       | 927   |      |       | 713   |      |
| Travel Time (s)     |       | 16.4  |      |       | 15.9  |      |       | 18.1  |      |       | 13.9  |      |

Intersection Summary

|            |       |
|------------|-------|
| Area Type: | Other |
|------------|-------|

Timings  
53: Beauregard St & Reading Ave

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |
| Volume (vph)         | 180   | 5     | 35    | 10    | 130   | 1520  | 30    | 410   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 4     | 4     | 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)  | 8.0   | 8.0   | 8.0   | 8.0   | 6.0   | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)    | 31.0  | 31.0  | 31.0  | 31.0  | 11.0  | 24.0  | 11.0  | 24.0  |
| Total Split (s)      | 40.0  | 40.0  | 40.0  | 40.0  | 12.0  | 89.0  | 11.0  | 88.0  |
| Total Split (%)      | 28.6% | 28.6% | 28.6% | 28.6% | 8.6%  | 63.6% | 7.9%  | 62.9% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  | 25.8  | 25.8  | 25.8  | 25.8  | 101.6 | 95.5  | 96.4  | 89.3  |
| Actuated g/C Ratio   | 0.18  | 0.18  | 0.18  | 0.18  | 0.73  | 0.68  | 0.69  | 0.64  |
| v/c Ratio            | 0.80  | 0.24  | 0.16  | 0.23  | 0.21  | 0.68  | 0.17  | 0.21  |
| Control Delay        | 77.6  | 11.6  | 46.5  | 13.9  | 4.8   | 10.0  | 6.4   | 6.4   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.1   | 0.0   | 0.0   |
| Total Delay          | 77.6  | 11.6  | 46.5  | 13.9  | 4.8   | 10.1  | 6.4   | 6.4   |
| LOS                  | E     | B     | D     | B     | A     | B     | A     | A     |
| Approach Delay       |       | 57.3  |       | 24.3  |       | 9.7   |       | 6.4   |
| Approach LOS         |       | E     |       | C     |       | A     |       | A     |

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 3 (2%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.80  
 Intersection Signal Delay: 14.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 79.2%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 53: Beauregard St & Reading Ave



Phasings  
53: Beauregard St & Reading Ave

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL  | NBT   | SBL  | SBT   |
|-------------------------|-------|-------|-------|-------|------|-------|------|-------|
| Protected Phases        |       | 4     |       | 4     | 5    | 2     | 1    | 6     |
| Permitted Phases        | 4     |       | 4     |       | 2    |       | 6    |       |
| Minimum Initial (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 6.0  | 10.0  | 6.0  | 10.0  |
| Minimum Split (s)       | 31.0  | 31.0  | 31.0  | 31.0  | 11.0 | 24.0  | 11.0 | 24.0  |
| Total Split (s)         | 40.0  | 40.0  | 40.0  | 40.0  | 12.0 | 89.0  | 11.0 | 88.0  |
| Total Split (%)         | 28.6% | 28.6% | 28.6% | 28.6% | 8.6% | 63.6% | 7.9% | 62.9% |
| Maximum Green (s)       | 34.0  | 34.0  | 34.0  | 34.0  | 7.0  | 83.0  | 6.0  | 82.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 2.0  | 2.0   | 2.0  | 2.0   |
| Lead/Lag                |       |       |       |       | Lead | Lag   | Lead | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |      |       |      |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0  | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0  | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None | C-Max | None | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   |      | 7.0   |      | 7.0   |
| Flash Dont Walk (s)     | 18.0  | 18.0  | 18.0  | 18.0  |      | 8.0   |      | 8.0   |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     |      | 0     |      | 0     |
| 90th %ile Green (s)     | 34.0  | 34.0  | 34.0  | 34.0  | 7.0  | 83.0  | 6.0  | 82.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max  | Coord | Max  | Coord |
| 70th %ile Green (s)     | 30.6  | 30.6  | 30.6  | 30.6  | 9.9  | 85.8  | 6.6  | 82.5  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap  | Coord | Gap  | Coord |
| 50th %ile Green (s)     | 26.0  | 26.0  | 26.0  | 26.0  | 8.6  | 90.9  | 6.1  | 88.4  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap  | Coord | Gap  | Coord |
| 30th %ile Green (s)     | 22.1  | 22.1  | 22.1  | 22.1  | 7.6  | 105.9 | 0.0  | 93.3  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap  | Coord | Skip | Coord |
| 10th %ile Green (s)     | 16.3  | 16.3  | 16.3  | 16.3  | 6.5  | 111.7 | 0.0  | 100.2 |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap  | Coord | Skip | Coord |

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 3 (2%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
54: Beauregard St & N Morgan St

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL  | WBT   | WBR  | NBL  | NBT  | NBR   | SBL  | SBT  | SBR  |
|---------------------|-------|------|------|------|-------|------|------|------|-------|------|------|------|
| Lane Configurations | ↔     | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12   | 12    | 12   | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           | 0%    |      |      |      | 0%    |      |      |      | 0%    |      |      |      |
| Storage Length (ft) | 0     |      | 175  | 0    |       | 0    | 115  |      | 0     | 115  |      | 0    |
| Storage Lanes       | 1     |      | 1    | 0    |       | 0    | 1    |      | 0     | 1    |      | 0    |
| Taper Length (ft)   | 50    |      |      | 50   |       |      | 50   |      |       | 50   |      |      |
| 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     | 0.97  |      |      |      | 0.99  |      |      |      | 1.00  |      |      |      |
| Frt                 | 0.850 |      |      |      | 0.910 |      |      |      | 0.998 |      |      |      |
| Flt Protected       | 0.950 |      |      |      | 0.984 |      |      |      | 0.950 |      |      |      |
| Satd. Flow (prot)   | 1770  | 1541 | 0    | 0    | 1650  | 0    | 1770 | 3530 | 0     | 1770 | 3481 | 0    |
| Flt Permitted       | 0.727 |      |      |      | 0.891 |      |      |      | 0.135 |      |      |      |
| Satd. Flow (perm)   | 1354  | 1541 | 0    | 0    | 1494  | 0    | 790  | 3530 | 0     | 251  | 3481 | 0    |
| Right Turn on Red   |       |      | Yes  |      |       |      | Yes  |      |       |      | Yes  |      |
| Satd. Flow (RTOR)   | 319   |      |      |      | 86    |      |      |      | 2     |      | 18   |      |
| Link Speed (mph)    | 25    |      |      |      | 25    |      |      |      | 35    |      | 35   |      |
| Link Distance (ft)  | 775   |      |      |      | 737   |      |      |      | 1035  |      | 958  |      |
| Travel Time (s)     | 21.1  |      |      |      | 20.1  |      |      |      | 20.2  |      | 18.7 |      |

Intersection Summary

Area Type: Other

Timings  
54: Beauregard St & N Morgan St

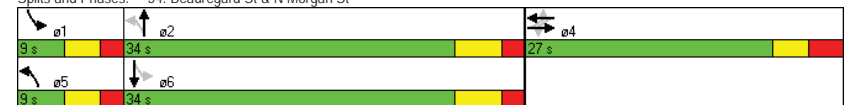
2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 170   | 0     | 40    | 0     | 5     | 1180  | 35    | 455   |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 4     |       | 4     |       | 5     |       | 2     |       |
| Permitted Phases     | 4     |       | 4     |       | 2     |       | 6     |       |
| Detector Phase       | 4     |       | 4     |       | 5     |       | 2     |       |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 8.0   | 8.0   | 8.0   | 8.0   | 4.0   | 15.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 27.0  | 27.0  | 27.0  | 27.0  | 9.0   | 21.0  | 9.0   | 21.0  |
| Total Split (s)      | 27.0  | 27.0  | 27.0  | 27.0  | 9.0   | 34.0  | 9.0   | 34.0  |
| Total Split (%)      | 38.6% | 38.6% | 38.6% | 38.6% | 12.9% | 48.6% | 12.9% | 48.6% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | Max   | C-Max | None  | C-Max |
| Act Effct Green (s)  | 14.6  | 14.6  |       | 14.6  | 41.4  | 38.0  | 39.4  | 34.4  |
| Actuated g/C Ratio   | 0.21  | 0.21  |       | 0.21  | 0.59  | 0.54  | 0.56  | 0.49  |
| v/c Ratio            | 0.65  | 0.02  |       | 0.34  | 0.01  | 0.67  | 0.17  | 0.31  |
| Control Delay        | 35.3  | 0.1   |       | 11.1  | 4.2   | 12.8  | 5.8   | 6.5   |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 35.3  | 0.1   |       | 11.1  | 4.2   | 12.8  | 5.8   | 6.5   |
| LOS                  | D     | A     |       | B     | A     | B     | A     | A     |
| Approach Delay       | 33.3  |       | 11.1  |       | 12.8  |       | 6.4   |       |
| Approach LOS         | C     |       | B     |       | B     |       | A     |       |

Intersection Summary

Cycle Length: 70  
 Actuated Cycle Length: 70  
 Offset: 61 (87%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.67  
 Intersection Signal Delay: 12.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 59.8%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 54: Beauregard St & N Morgan St





Phasings  
54: Beauregard St & N Morgan St

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 4     |       | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases        | 4     |       | 4     |       | 2     |       | 6     |       |
| Minimum Initial (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 4.0   | 15.0  | 4.0   | 10.0  |
| Minimum Split (s)       | 27.0  | 27.0  | 27.0  | 27.0  | 9.0   | 21.0  | 9.0   | 21.0  |
| Total Split (s)         | 27.0  | 27.0  | 27.0  | 27.0  | 9.0   | 34.0  | 9.0   | 34.0  |
| Total Split (%)         | 38.6% | 38.6% | 38.6% | 38.6% | 12.9% | 48.6% | 12.9% | 48.6% |
| Maximum Green (s)       | 21.0  | 21.0  | 21.0  | 21.0  | 4.0   | 28.0  | 4.0   | 28.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 4.0   | 2.0   | 4.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | Max   | C-Max | None  | C-Max |
| Walk Time (s)           | 4.0   | 4.0   | 4.0   | 4.0   |       | 7.0   |       | 7.0   |
| Flash Dont Walk (s)     | 17.0  | 17.0  | 17.0  | 17.0  |       | 8.0   |       | 8.0   |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     |       | 0     |       | 0     |
| 90th %ile Green (s)     | 21.0  | 21.0  | 21.0  | 21.0  | 4.0   | 28.0  | 4.0   | 28.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | MaxR  | Coord | Max   | Coord |
| 70th %ile Green (s)     | 17.1  | 17.1  | 17.1  | 17.1  | 4.0   | 31.9  | 4.0   | 31.9  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | MaxR  | Coord | Max   | Coord |
| 50th %ile Green (s)     | 14.6  | 14.6  | 14.6  | 14.6  | 4.0   | 34.4  | 4.0   | 34.4  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | MaxR  | Coord | Max   | Coord |
| 30th %ile Green (s)     | 12.0  | 12.0  | 12.0  | 12.0  | 4.0   | 46.0  | 0.0   | 37.0  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | MaxR  | Coord | Skip  | Coord |
| 10th %ile Green (s)     | 8.4   | 8.4   | 8.4   | 8.4   | 4.0   | 49.6  | 0.0   | 40.6  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | MaxR  | Coord | Skip  | Coord |

Intersection Summary

Cycle Length: 70  
 Actuated Cycle Length: 70  
 Offset: 61 (87%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
55: Beauregard St & N Armistead St

2020 Market with Traffic Mitigation  
AM PEAK


| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT   | WBR   | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|---------------------|------|-------|-------|------|-------|-------|-------|-------|------|-------|-------|------|
| Lane Configurations |      | ↕     | ↕     |      | ↕     | ↕     | ↕     | ↕↔    |      | ↕     | ↕     | ↕    |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           |      | 0%    |       |      | 0%    |       |       | 0%    |      |       | 0%    |      |
| Storage Length (ft) | 0    |       | 50    | 0    |       | 50    | 90    |       | 0    | 80    |       | 0    |
| Storage Lanes       | 0    |       | 1     | 0    |       | 1     | 1     |       | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50   |       |       | 50   |       |       | 50    |       |      | 50    |       |      |
| 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     |      |       |       |      |       | 0.98  |       | 1.00  |      |       | 1.00  |      |
| Frt                 |      |       | 0.850 |      |       | 0.850 |       | 0.998 |      |       | 0.998 |      |
| Flt Protected       |      | 0.950 |       |      | 0.950 |       | 0.950 |       |      | 0.950 |       |      |
| Satd. Flow (prot)   | 0    | 1770  | 1583  | 0    | 1770  | 1583  | 1770  | 3530  | 0    | 1770  | 3531  | 0    |
| Flt Permitted       |      | 0.704 |       |      | 0.736 |       | 0.479 |       |      | 0.238 |       |      |
| Satd. Flow (perm)   | 0    | 1311  | 1583  | 0    | 1371  | 1553  | 892   | 3530  | 0    | 443   | 3531  | 0    |
| Right Turn on Red   |      |       | Yes   |      |       | Yes   |       |       | Yes  |       |       | Yes  |
| Satd. Flow (RTOR)   |      |       | 11    |      |       | 166   |       | 2     |      |       | 1     |      |
| Link Speed (mph)    |      | 25    |       |      | 25    |       |       | 35    |      |       | 35    |      |
| Link Distance (ft)  |      | 620   |       |      | 778   |       |       | 1020  |      |       | 1035  |      |
| Travel Time (s)     |      | 16.9  |       |      | 21.2  |       |       | 19.9  |      |       | 20.2  |      |

Intersection Summary

Area Type: Other

**Timings**  
**55: Beauregard St & N Armistead St**

2020 Market with Traffic Mitigation  
 AM PEAK



| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       | ↕     | ↕     |       | ↕     | ↕     | ↕     | ↕     | ↕     | ↕     |
| Volume (vph)         | 30    | 0     | 10    | 75    | 0     | 220   | 5     | 950   | 60    | 440   |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | Perm  | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 4     |       |       | 4     |       |       | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 4     | 4     |       | 4     | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 5.0   | 12.0  | 5.0   | 12.0  |
| Minimum Split (s)    | 36.5  | 36.5  | 36.5  | 36.5  | 36.5  | 36.5  | 10.0  | 22.0  | 10.0  | 22.0  |
| Total Split (s)      | 47.0  | 47.0  | 47.0  | 47.0  | 47.0  | 47.0  | 12.0  | 79.0  | 14.0  | 81.0  |
| Total Split (%)      | 33.6% | 33.6% | 33.6% | 33.6% | 33.6% | 33.6% | 8.6%  | 56.4% | 10.0% | 57.9% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             | Lead  |       |       | Lag   |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max |       |
| Act Effct Green (s)  | 14.8  | 14.8  |       | 14.8  | 14.8  | 108.8 | 103.3 | 113.1 | 110.6 |       |
| Actuated g/C Ratio   | 0.11  | 0.11  |       | 0.11  | 0.11  | 0.78  | 0.74  | 0.81  | 0.79  |       |
| v/c Ratio            | 0.23  | 0.06  |       | 0.56  | 0.76  | 0.01  | 0.40  | 0.15  | 0.17  |       |
| Control Delay        | 58.5  | 24.4  |       | 72.7  | 34.4  | 4.4   | 7.7   | 2.3   | 2.9   |       |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Total Delay          | 58.5  | 24.4  |       | 72.7  | 34.4  | 4.4   | 7.7   | 2.3   | 2.9   |       |
| LOS                  | E     | C     |       | E     | C     | A     | A     | A     | A     |       |
| Approach Delay       | 49.8  |       |       |       | 44.2  |       | 7.7   |       | 2.8   |       |
| Approach LOS         | D     |       |       |       | D     |       | A     |       | A     |       |


**Intersection Summary**

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 123 (88%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.76  
 Intersection Signal Delay: 13.2  
 Intersection LOS: B  
 Intersection Capacity Utilization 64.2%  
 ICU Level of Service C  
 Analysis Period (min) 15



**Phasings**  
**55: Beauregard St & N Armistead St**

2020 Market with Traffic Mitigation  
 AM PEAK



| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|
| Protected Phases        | 4     |       | 4     |       | 4     |       | 5    | 2     | 1     | 6     |
| Permitted Phases        | 4     |       | 4     | 4     |       | 4     | 2    |       | 6     |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 5.0  | 12.0  | 5.0   | 12.0  |
| Minimum Split (s)       | 36.5  | 36.5  | 36.5  | 36.5  | 36.5  | 36.5  | 10.0 | 22.0  | 10.0  | 22.0  |
| Total Split (s)         | 47.0  | 47.0  | 47.0  | 47.0  | 47.0  | 47.0  | 12.0 | 79.0  | 14.0  | 81.0  |
| Total Split (%)         | 33.6% | 33.6% | 33.6% | 33.6% | 33.6% | 33.6% | 8.6% | 56.4% | 10.0% | 57.9% |
| Maximum Green (s)       | 40.5  | 40.5  | 40.5  | 40.5  | 40.5  | 40.5  | 7.0  | 73.0  | 9.0   | 75.0  |
| Yellow Time (s)         | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.0  | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0  | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead  |       |       | Lag   |       |       | Lead | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |      |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2  | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None | C-Max | None  | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |      | 4.0   |       | 4.0   |
| Flash Dont Walk (s)     | 23.0  | 23.0  | 23.0  | 23.0  | 23.0  | 23.0  |      | 12.0  |       | 12.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     | 0     |      | 0     |       | 0     |
| 90th %ile Green (s)     | 23.6  | 23.6  | 23.6  | 23.6  | 23.6  | 23.6  | 5.9  | 91.0  | 7.9   | 93.0  |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Gap  | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 17.6  | 17.6  | 17.6  | 17.6  | 17.6  | 17.6  | 0.0  | 98.0  | 6.9   | 109.9 |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Skip | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 13.7  | 13.7  | 13.7  | 13.7  | 13.7  | 13.7  | 0.0  | 102.4 | 6.4   | 113.8 |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Skip | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 11.2  | 11.2  | 11.2  | 11.2  | 11.2  | 11.2  | 0.0  | 105.3 | 6.0   | 116.3 |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Skip | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 7.7   | 7.7   | 7.7   | 7.7   | 7.7   | 7.7   | 0.0  | 119.8 | 0.0   | 119.8 |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Skip | Coord | Skip  | Coord |

**Intersection Summary**

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 123 (88%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
56: Beauregard St & Quantrell Ave

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | WBL   | WBR   | NBT  | NBR   | SBL   | SBT  |
|---------------------|-------|-------|------|-------|-------|------|
| Lane Configurations | ↔     | ↔     | ↕    | ↕     | ↔     | ↕    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           | 0%    |       | 0%   |       |       | 0%   |
| Storage Length (ft) | 0     | 50    |      | 85    | 100   |      |
| Storage Lanes       | 1     | 1     |      | 1     | 1     |      |
| Taper Length (ft)   | 50    |       |      |       | 50    |      |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95 | 1.00  | 1.00  | 0.95 |
| Ped Bike Factor     | 0.98  |       |      |       |       |      |
| Frt                 |       | 0.850 |      | 0.850 |       |      |
| Frt Protected       | 0.950 |       |      |       | 0.950 |      |
| Satd. Flow (prot)   | 1770  | 1583  | 3539 | 1583  | 1770  | 3539 |
| Frt Permitted       | 0.950 |       |      |       | 0.289 |      |
| Satd. Flow (perm)   | 1735  | 1583  | 3539 | 1583  | 538   | 3539 |
| Right Turn on Red   |       | Yes   |      | Yes   |       |      |
| Satd. Flow (RTOR)   |       | 108   |      | 32    |       |      |
| Link Speed (mph)    | 30    |       | 35   |       |       | 35   |
| Link Distance (ft)  | 751   |       | 931  |       |       | 1020 |
| Travel Time (s)     | 17.1  |       | 18.1 |       |       | 19.9 |

Intersection Summary

Area Type: Other

Timings  
56: Beauregard St & Quantrell Ave

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↕     | ↕     | ↔     | ↕     |
| Volume (vph)         | 130   | 100   | 870   | 30    | 20    | 505   |
| Turn Type            | NA    | Perm  | NA    | Perm  | Perm  | NA    |
| Protected Phases     | 4     |       | 2     |       |       | 2     |
| Permitted Phases     |       | 4     |       | 2     | 2     |       |
| Detector Phase       | 4     | 4     | 2     | 2     | 2     | 2     |
| Switch Phase         |       |       |       |       |       |       |
| Minimum Initial (s)  | 6.0   | 6.0   | 10.0  | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)    | 12.0  | 12.0  | 16.0  | 16.0  | 16.0  | 16.0  |
| Total Split (s)      | 24.0  | 24.0  | 46.0  | 46.0  | 46.0  | 46.0  |
| Total Split (%)      | 34.3% | 34.3% | 65.7% | 65.7% | 65.7% | 65.7% |
| Yellow Time (s)      | 3.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   |

Lead/Lag

Lead-Lag Optimize?

| Recall Mode         | None | None | C-Max | C-Max | C-Max | C-Max |
|---------------------|------|------|-------|-------|-------|-------|
| Act Effct Green (s) | 10.8 | 10.8 | 47.2  | 47.2  | 47.2  | 47.2  |
| Actuated g/C Ratio  | 0.15 | 0.15 | 0.67  | 0.67  | 0.67  | 0.67  |
| v/c Ratio           | 0.51 | 0.32 | 0.39  | 0.03  | 0.06  | 0.23  |
| Control Delay       | 33.2 | 8.4  | 6.1   | 2.1   | 1.8   | 1.8   |
| Queue Delay         | 0.0  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay         | 33.2 | 8.4  | 6.1   | 2.1   | 1.8   | 1.8   |
| LOS                 | C    | A    | A     | A     | A     | A     |
| Approach Delay      | 22.4 |      | 5.9   |       |       | 1.8   |
| Approach LOS        | C    |      | A     |       |       | A     |

Intersection Summary

Cycle Length: 70  
 Actuated Cycle Length: 70  
 Offset: 29 (41%), Referenced to phase 2:NBSB, Start of Green  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.51  
 Intersection Signal Delay: 6.9  
 Intersection Capacity Utilization 41.3%  
 Analysis Period (min) 15  
 Intersection LOS: A  
 ICU Level of Service A

Splits and Phases: 56: Beauregard St & Quantrell Ave



Phasings  
56: Beauregard St & Quantrell Ave

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group              | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 4     |       | 2     |       |       | 2     |
| Permitted Phases        |       | 4     |       | 2     | 2     |       |
| Minimum Initial (s)     | 6.0   | 6.0   | 10.0  | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 12.0  | 12.0  | 16.0  | 16.0  | 16.0  | 16.0  |
| Total Split (s)         | 24.0  | 24.0  | 46.0  | 46.0  | 46.0  | 46.0  |
| Total Split (%)         | 34.3% | 34.3% | 65.7% | 65.7% | 65.7% | 65.7% |
| Maximum Green (s)       | 18.0  | 18.0  | 40.0  | 40.0  | 40.0  | 40.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s)           |       |       |       |       |       |       |
| Flash Dont Walk (s)     |       |       |       |       |       |       |
| Pedestrian Calls (#/hr) |       |       |       |       |       |       |
| 90th %ile Green (s)     | 15.0  | 15.0  | 43.0  | 43.0  | 43.0  | 43.0  |
| 90th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 70th %ile Green (s)     | 12.5  | 12.5  | 45.5  | 45.5  | 45.5  | 45.5  |
| 70th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 50th %ile Green (s)     | 10.8  | 10.8  | 47.2  | 47.2  | 47.2  | 47.2  |
| 50th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 30th %ile Green (s)     | 9.1   | 9.1   | 48.9  | 48.9  | 48.9  | 48.9  |
| 30th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 10th %ile Green (s)     | 6.6   | 6.6   | 51.4  | 51.4  | 51.4  | 51.4  |
| 10th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord | Coord |

| Intersection Summary   |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
| Cycle Length: 70   |  |  |  |  |  |  |
| Actuated Cycle Length: 70                                    |  |  |  |  |  |  |
| Offset: 29 (41%), Referenced to phase 2-NBSB, Start of Green |  |  |  |  |  |  |
| Control Type: Actuated-Coordinated                           |  |  |  |  |  |  |

Lanes and Geometrics  
58: Lincoln Rd/Gloucester Rd & Beauregard St

2020 Market with Traffic Mitigation  
AM PEAK

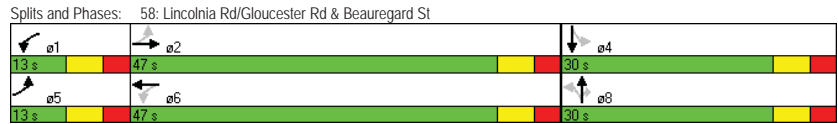
| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT  | WBR  | NBL  | NBT  | NBR   | SBL  | SBT  | SBR   |
|---------------------|-------|-------|------|-------|------|------|------|------|-------|------|------|-------|
| Lane Configurations |       |       |      |       |      |      |      |      |       |      |      |       |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12   | 12   | 12   | 12   | 12    | 12   | 12   | 12    |
| Grade (%)           |       | 0%    |      |       | 0%   |      |      | 0%   |       |      | 0%   |       |
| Storage Length (ft) | 175   |       | 0    | 175   |      | 0    | 0    |      | 0     | 0    |      | 0     |
| Storage Lanes       | 1     |       | 0    | 1     |      | 0    | 0    |      | 1     | 0    |      | 0     |
| Taper Length (ft)   | 50    |       |      | 50    |      |      | 50   |      | 50    |      |      | 50    |
| 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  |
| Ped Bike Factor     |       | 1.00  |      |       |      |      |      |      | 0.99  |      |      |       |
| Frt                 |       | 0.979 |      |       |      |      |      |      | 0.850 |      |      | 0.865 |
| Flt Protected       | 0.950 |       |      | 0.950 |      |      |      |      | 0.950 |      |      |       |
| Satd. Flow (prot)   | 1770  | 3449  | 0    | 1770  | 3539 | 0    | 0    | 1770 | 1583  | 0    | 1611 | 0     |
| Flt Permitted       | 0.392 |       |      | 0.197 |      |      |      |      | 0.754 |      |      |       |
| Satd. Flow (perm)   | 730   | 3449  | 0    | 367   | 3539 | 0    | 0    | 1405 | 1560  | 0    | 1611 | 0     |
| Right Turn on Red   |       |       | Yes  |       |      | Yes  |      |      | Yes   |      |      | Yes   |
| Satd. Flow (RTOR)   |       | 27    |      |       |      |      |      |      | 54    |      |      | 277   |
| Link Speed (mph)    | 35    |       |      | 35    |      |      |      |      | 35    |      |      | 30    |
| Link Distance (ft)  | 545   |       |      | 931   |      |      |      |      | 614   |      |      | 831   |
| Travel Time (s)     |       | 10.6  |      |       | 18.1 |      |      |      | 12.0  |      |      | 18.9  |

| Intersection Summary |       |
|----------------------|-------|
| Area Type:           | Other |

Timings 2020 Market with Traffic Mitigation  
AM PEAK  
58: Lincolnia Rd/Gloucester Rd & Beauregard St

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Volume (vph)         | 5     | 850   | 25    | 610   | 200   | 0     | 50    | 0     |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     |       | 8     |       | 4     |
| Permitted Phases     | 2     |       | 6     |       | 8     |       | 8     |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 8     | 8     | 8     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 13.0  | 17.0  | 13.0  | 17.0  | 15.0  | 15.0  | 15.0  | 15.0  |
| Total Split (s)      | 13.0  | 47.0  | 13.0  | 47.0  | 30.0  | 30.0  | 30.0  | 30.0  |
| Total Split (%)      | 14.4% | 52.2% | 14.4% | 52.2% | 33.3% | 33.3% | 33.3% | 33.3% |
| Yellow Time (s)      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | None  | None  | None  |
| Act Effct Green (s)  | 54.8  | 52.5  | 56.4  | 55.2  | 18.2  | 18.2  | 18.2  |       |
| Actuated g/C Ratio   | 0.61  | 0.58  | 0.63  | 0.61  | 0.20  | 0.20  | 0.20  |       |
| v/c Ratio            | 0.01  | 0.53  | 0.08  | 0.30  | 0.75  | 0.15  | 0.01  |       |
| Control Delay        | 4.8   | 9.4   | 7.9   | 10.3  | 50.1  | 8.8   | 0.0   |       |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Total Delay          | 4.8   | 9.4   | 7.9   | 10.3  | 50.1  | 8.8   | 0.0   |       |
| LOS                  | A     | A     | A     | B     | D     | A     | A     |       |
| Approach Delay       |       | 9.4   |       | 10.2  |       | 41.8  |       | 0.0   |
| Approach LOS         |       | A     |       | B     |       | D     |       | A     |

**Intersection Summary**  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 74 (82%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.75  
 Intersection Signal Delay: 13.9  
 Intersection LOS: B  
 Intersection Capacity Utilization 58.2%  
 ICU Level of Service B  
 Analysis Period (min) 15



Phasings 2020 Market with Traffic Mitigation  
AM PEAK  
58: Lincolnia Rd/Gloucester Rd & Beauregard St

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 5     | 2     | 1     | 6     |       | 8     |       | 4     |
| Permitted Phases        | 2     |       | 6     |       | 8     |       | 8     |       |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 13.0  | 17.0  | 13.0  | 17.0  | 15.0  | 15.0  | 15.0  | 15.0  |
| Total Split (s)         | 13.0  | 47.0  | 13.0  | 47.0  | 30.0  | 30.0  | 30.0  | 30.0  |
| Total Split (%)         | 14.4% | 52.2% | 14.4% | 52.2% | 33.3% | 33.3% | 33.3% | 33.3% |
| Maximum Green (s)       | 6.0   | 40.0  | 6.0   | 40.0  | 23.0  | 23.0  | 23.0  | 23.0  |
| Yellow Time (s)         | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | C-Min | None  | C-Min | None  | None  | None  | None  |
| Walk Time (s)           |       | 7.0   |       | 7.0   |       | 7.0   |       | 7.0   |
| Flash Dont Walk (s)     |       | 19.0  |       | 23.0  |       | 23.0  |       | 22.0  |
| Pedestrian Calls (#/hr) |       | 0     |       | 0     |       | 0     |       | 0     |
| 90th %ile Green (s)     | 5.9   | 40.0  | 6.0   | 40.1  | 23.0  | 23.0  | 23.0  | 23.0  |
| 90th %ile Term Code     | Gap   | Coord | Max   | Coord | Max   | Max   | Max   | Hold  |
| 70th %ile Green (s)     | 0.0   | 40.7  | 6.4   | 54.1  | 21.9  | 21.9  | 21.9  | 21.9  |
| 70th %ile Term Code     | Skip  | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Hold  |
| 50th %ile Green (s)     | 0.0   | 57.1  | 0.0   | 57.1  | 18.9  | 18.9  | 18.9  | 18.9  |
| 50th %ile Term Code     | Skip  | Coord | Skip  | Coord | Gap   | Gap   | Gap   | Hold  |
| 30th %ile Green (s)     | 0.0   | 60.1  | 0.0   | 60.1  | 15.9  | 15.9  | 15.9  | 15.9  |
| 30th %ile Term Code     | Skip  | Coord | Skip  | Coord | Gap   | Gap   | Gap   | Hold  |
| 10th %ile Green (s)     | 0.0   | 64.5  | 0.0   | 64.5  | 11.5  | 11.5  | 11.5  | 11.5  |
| 10th %ile Term Code     | Skip  | Coord | Skip  | Coord | Gap   | Gap   | Gap   | Hold  |

**Intersection Summary**  
 Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 74 (82%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
59: Beauregard St & N Chambliss St/Plaza at Landmark

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT  | WBR  | NBL   | NBT  | NBR  | SBL   | SBT  | SBR  |
|---------------------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|
| Lane Configurations | ↔     | ↔    | ↔    | ↔     | ↔    | ↔    | ↔     | ↔    | ↔    | ↔     | ↔    | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12   | 12   |
| Grade (%)           | 0%    |      | 0%   |       | 0%   |      | 0%    |      | 0%   |       | 0%   |      |
| Storage Length (ft) | 0     |      | 75   | 0     |      | 0    | 200   |      | 140  | 170   |      | 0    |
| Storage Lanes       | 1     |      | 1    | 1     |      | 0    | 1     |      | 1    | 1     |      | 0    |
| Taper Length (ft)   | 50    |      | 50   |       |      | 50   |       |      | 50   |       |      | 50   |
| Lane Util. Factor   | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00  | 0.95 | 1.00 | 1.00  | 0.95 | 0.95 |
| Ped Bike Factor     |       |      |      |       | 0.99 |      |       |      |      | 0.97  |      |      |
| Frt                 | 0.850 |      |      | 0.925 |      |      | 0.850 |      |      | 0.999 |      |      |
| Flt Protected       | 0.950 |      |      | 0.950 |      |      | 0.950 |      |      | 0.950 |      |      |
| Satd. Flow (prot)   | 1770  | 1863 | 1583 | 1770  | 1711 | 0    | 1770  | 3539 | 1583 | 1770  | 3536 | 0    |
| Flt Permitted       | 0.889 |      |      | 0.646 |      |      | 0.201 |      |      | 0.311 |      |      |
| Satd. Flow (perm)   | 1656  | 1863 | 1583 | 1203  | 1711 | 0    | 374   | 3539 | 1543 | 579   | 3536 | 0    |
| Right Turn on Red   |       |      | Yes  |       |      | Yes  |       |      | Yes  |       |      | Yes  |
| Satd. Flow (RTOR)   | 473   |      |      | 22    |      |      | 32    |      |      | 1     |      |      |
| Link Speed (mph)    | 30    |      |      |       | 25   |      | 25    |      |      |       | 35   |      |
| Link Distance (ft)  | 622   |      |      | 252   |      |      | 846   |      |      | 464   |      |      |
| Travel Time (s)     | 14.1  |      |      |       | 6.9  |      | 23.1  |      |      |       | 9.0  |      |

Intersection Summary

Area Type: Other

Timings  
59: Beauregard St & N Chambliss St/Plaza at Landmark

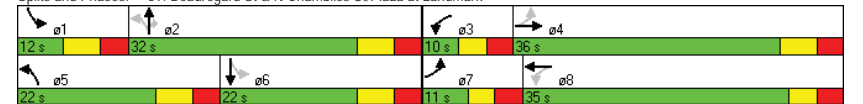
2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBL   | EBT   | EBR  | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |  |
|----------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|--|
| Lane Configurations  | ↔     | ↔     | ↔    | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |  |
| Volume (vph)         | 120   | 25    | 440  | 55    | 20    | 390   | 855   | 40    | 15    | 590   |  |
| Turn Type            | pm+pt | NA    | Free | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    |  |
| Protected Phases     | 7     | 4     |      | 3     | 8     | 5     | 2     |       | 1     | 6     |  |
| Permitted Phases     | 4     |       | Free | 8     |       | 2     |       | 2     | 6     |       |  |
| Detector Phase       | 7     | 4     |      | 3     | 8     | 5     | 2     | 2     | 1     | 6     |  |
| Switch Phase         |       |       |      |       |       |       |       |       |       |       |  |
| Minimum Initial (s)  | 4.0   | 4.0   |      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 1.0   | 4.0   |  |
| Minimum Split (s)    | 10.0  | 36.0  |      | 10.0  | 22.0  | 12.0  | 22.0  | 22.0  | 12.0  | 22.0  |  |
| Total Split (s)      | 11.0  | 36.0  | 0.0  | 10.0  | 35.0  | 22.0  | 32.0  | 32.0  | 12.0  | 22.0  |  |
| Total Split (%)      | 12.2% | 40.0% | 0.0% | 11.1% | 38.9% | 24.4% | 35.6% | 35.6% | 13.3% | 24.4% |  |
| Yellow Time (s)      | 3.0   | 4.0   |      | 3.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |  |
| All-Red Time (s)     | 3.0   | 3.0   |      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |  |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -5.0  |  |
| Total Lost Time (s)  | 6.0   | 7.0   | 4.0  | 6.0   | 6.0   | 7.0   | 7.0   | 7.0   | 7.0   | 2.0   |  |
| Lead/Lag             | Lead  | Lag   |      | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |  |
| Lead-Lag Optimize?   |       |       |      |       |       |       |       |       |       |       |  |
| Recall Mode          | None  | None  |      | None  | None  | None  | C-Min | C-Min | None  | C-Min |  |
| Act Effct Green (s)  | 9.1   | 7.0   | 90.0 | 10.3  | 6.9   | 63.4  | 60.9  | 60.9  | 37.1  | 37.3  |  |
| Actuated g/C Ratio   | 0.10  | 0.08  | 1.00 | 0.11  | 0.08  | 0.70  | 0.68  | 0.68  | 0.41  | 0.41  |  |
| v/c Ratio            | 0.74  | 0.18  | 0.30 | 0.32  | 0.29  | 0.66  | 0.38  | 0.04  | 0.05  | 0.44  |  |
| Control Delay        | 61.7  | 41.0  | 0.5  | 36.1  | 28.3  | 15.8  | 8.8   | 4.6   | 9.8   | 18.3  |  |
| Queue Delay          | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Total Delay          | 61.7  | 41.0  | 0.5  | 36.1  | 28.3  | 15.8  | 8.8   | 4.6   | 9.8   | 18.3  |  |
| LOS                  | E     | D     | A    | D     | C     | B     | A     | A     | A     | B     |  |
| Approach Delay       | 14.8  |       |      |       | 32.8  |       | 10.8  |       | 18.1  |       |  |
| Approach LOS         | B     |       |      |       | C     |       | B     |       | B     |       |  |

Intersection Summary

Cycle Length: 90  
 Actuated Cycle Length: 90  
 Offset: 1 (1%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 14.2  
 Intersection LOS: B  
 Intersection Capacity Utilization 66.4%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 59: Beauregard St & N Chambliss St/Plaza at Landmark



Phasings

59: Beauregard St & N Chambliss St/Plaza at Landmark

2020 Market with Traffic Mitigation

AM PEAK

| Lane Group              | EBL   | EBT   | EBR  | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 7     | 4     |      | 3     | 8     | 5     | 2     |       | 1     | 6     |
| Permitted Phases        | 4     |       | Free | 8     |       |       |       | 2     | 6     |       |
| Minimum Initial (s)     | 4.0   | 4.0   |      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 1.0   | 4.0   |
| Minimum Split (s)       | 10.0  | 36.0  |      | 10.0  | 22.0  | 12.0  | 22.0  | 22.0  | 12.0  | 22.0  |
| Total Split (s)         | 11.0  | 36.0  | 0.0  | 10.0  | 35.0  | 22.0  | 32.0  | 32.0  | 12.0  | 22.0  |
| Total Split (%)         | 12.2% | 40.0% | 0.0% | 11.1% | 38.9% | 24.4% | 35.6% | 35.6% | 13.3% | 24.4% |
| Maximum Green (s)       | 5.0   | 29.0  |      | 4.0   | 29.0  | 15.0  | 25.0  | 25.0  | 5.0   | 15.0  |
| Yellow Time (s)         | 3.0   | 4.0   |      | 3.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   |      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   |      | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |      |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   |      | 3.0   | 3.0   | 2.0   | 4.0   | 4.0   | 2.0   | 4.0   |
| Minimum Gap (s)         | 3.0   | 3.0   |      | 3.0   | 3.0   | 2.0   | 4.0   | 4.0   | 2.0   | 4.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  |      | None  | None  | None  | C-Min | C-Min | None  | C-Min |
| Walk Time (s)           |       | 7.0   |      |       | 5.0   |       |       |       |       |       |
| Flash Dont Walk (s)     |       | 22.0  |      |       | 11.0  |       |       |       |       |       |
| Pedestrian Calls (#/hr) |       | 0     |      |       | 0     |       |       |       |       |       |
| 90th %ile Green (s)     | 5.0   | 9.4   |      | 4.0   | 9.4   | 25.8  | 44.2  | 44.2  | 5.4   | 23.8  |
| 90th %ile Term Code     | Max   | Hold  |      | Max   | Gap   | Gap   | Coord | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 5.0   | 7.7   |      | 4.0   | 7.7   | 23.6  | 58.3  | 58.3  | 0.0   | 27.7  |
| 70th %ile Term Code     | Max   | Hold  |      | Max   | Gap   | Gap   | Coord | Coord | Skip  | Coord |
| 50th %ile Green (s)     | 5.0   | 0.0   |      | 17.6  | 6.6   | 22.9  | 59.4  | 59.4  | 0.0   | 29.5  |
| 50th %ile Term Code     | Max   | Skip  |      | Hold  | Gap   | Gap   | Coord | Coord | Skip  | Coord |
| 30th %ile Green (s)     | 5.0   | 0.0   |      | 5.0   | 0.0   | 20.6  | 72.0  | 72.0  | 0.0   | 44.4  |
| 30th %ile Term Code     | Max   | Skip  |      | Hold  | Skip  | Gap   | Coord | Coord | Skip  | Coord |
| 10th %ile Green (s)     | 6.5   | 5.5   |      | 0.0   | 0.0   | 27.3  | 70.5  | 70.5  | 0.0   | 36.2  |
| 10th %ile Term Code     | Hold  | Hold  |      | Skip  | Skip  | Gap   | Coord | Coord | Skip  | Coord |

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 1 (1%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Control Type: Actuated-Coordinated

Lanes and Geometrics

61: N Beauregard St/Beauregard St & Route 236

2020 Market with Traffic Mitigation

AM PEAK

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT  | WBR   | NBL   | NBT  | NBR   | SBL   | SBT   | SBR   |
|---------------------|-------|-------|------|-------|------|-------|-------|------|-------|-------|-------|-------|
| Lane Configurations |       |       |      |       |      |       |       |      |       |       |       |       |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12    |
| Grade (%)           |       | 0%    |      |       | 0%   |       |       | 0%   |       |       | 0%    |       |
| Storage Length (ft) | 600   |       | 0    | 215   |      | 500   | 120   |      | 0     | 0     |       | 0     |
| Storage Lanes       | 2     |       | 0    | 1     |      | 1     | 1     |      | 1     | 1     |       | 1     |
| Taper Length (ft)   | 50    |       |      | 50    |      | 50    |       |      | 50    |       |       | 50    |
| Lane Util. Factor   | 0.97  | 0.91  | 0.91 | 1.00  | 0.91 | 1.00  | 1.00  | 1.00 | 1.00  | 0.95  | 0.95  | 1.00  |
| Ped Bike Factor     |       | 1.00  |      |       |      | 0.98  |       |      | 0.98  |       |       | 0.97  |
| Frt                 |       | 0.997 |      |       |      | 0.850 |       |      | 0.850 |       |       | 0.850 |
| Flt Protected       | 0.950 |       |      | 0.950 |      |       | 0.950 |      |       | 0.950 | 0.959 |       |
| Satd. Flow (prot)   | 3433  | 5065  | 0    | 1770  | 5085 | 1583  | 1770  | 1863 | 1583  | 1681  | 1697  | 1583  |
| Flt Permitted       | 0.950 |       |      | 0.950 |      |       | 0.950 |      |       | 0.950 | 0.959 |       |
| Satd. Flow (perm)   | 3433  | 5065  | 0    | 1770  | 5085 | 1552  | 1770  | 1863 | 1550  | 1681  | 1697  | 1543  |
| Right Turn on Red   |       |       | Yes  |       |      | Yes   |       |      | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)   |       | 2     |      |       |      | 413   |       |      | 8     |       |       | 199   |
| Link Speed (mph)    |       | 40    |      |       | 40   |       |       | 25   |       |       |       | 25    |
| Link Distance (ft)  |       | 1126  |      |       | 1020 |       |       | 665  |       |       |       | 846   |
| Travel Time (s)     |       | 19.2  |      |       | 17.4 |       |       | 18.1 |       |       |       | 23.1  |

Intersection Summary

Area Type: Other

Timings

61: N Beauregard St/Beauregard St & Route 236

2020 Market with Traffic Mitigation

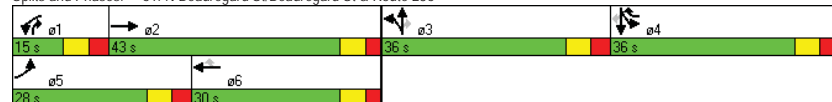
AM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |       |
| Volume (vph)         | 620   | 1075  | 50    | 880   | 575   | 90    | 90    | 55    | 815   | 60    | 210   |
| Turn Type            | Prot  | NA    | Prot  | NA    | pm+ov | Split | NA    | pm+ov | Split | NA    | Perm  |
| Protected Phases     | 5     | 2     | 1     | 6     | 4     | 3     | 3     | 1     | 4     | 4     |       |
| Permitted Phases     |       |       |       |       | 6     |       |       | 3     |       |       | 4     |
| Detector Phase       | 5     | 2     | 1     | 6     | 4     | 3     | 3     | 1     | 4     | 4     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 8.0   | 20.0  | 8.0   | 20.0  | 8.0   | 4.0   | 4.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)    | 15.0  | 26.5  | 15.0  | 28.5  | 36.0  | 36.0  | 36.0  | 15.0  | 36.0  | 36.0  | 36.0  |
| Total Split (s)      | 28.0  | 43.0  | 15.0  | 30.0  | 36.0  | 36.0  | 36.0  | 15.0  | 36.0  | 36.0  | 36.0  |
| Total Split (%)      | 21.5% | 33.1% | 11.5% | 23.1% | 27.7% | 27.7% | 27.7% | 11.5% | 27.7% | 27.7% | 27.7% |
| Yellow Time (s)      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 2.5   | 3.0   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | -3.0  | -2.5  | -3.0  | -2.5  | -3.0  | -3.0  | -3.0  | -3.0  | -5.0  | -5.0  | -5.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lead  | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | Min   | None  | Min   | None  | None  | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 24.0  | 42.1  | 11.0  | 26.0  | 58.0  | 14.5  | 14.5  | 25.5  | 34.0  | 34.0  | 34.0  |
| Actuated g/C Ratio   | 0.21  | 0.37  | 0.10  | 0.23  | 0.52  | 0.13  | 0.13  | 0.23  | 0.30  | 0.30  | 0.30  |
| v/c Ratio            | 0.91  | 0.62  | 0.31  | 0.80  | 0.61  | 0.43  | 0.41  | 0.16  | 0.93  | 0.91  | 0.37  |
| Control Delay        | 61.4  | 31.7  | 53.6  | 47.4  | 5.9   | 51.0  | 50.1  | 16.4  | 65.4  | 62.1  | 8.2   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 61.4  | 31.7  | 53.6  | 47.4  | 5.9   | 51.0  | 50.1  | 16.4  | 65.4  | 62.1  | 8.2   |
| LOS                  | E     | C     | D     | D     | A     | D     | D     | B     | E     | E     | A     |
| Approach Delay       |       | 42.4  |       | 31.7  |       |       | 42.6  |       |       | 53.0  |       |
| Approach LOS         |       | D     |       | C     |       |       | D     |       |       | D     |       |

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 112.5  
 Natural Cycle: 130  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.93  
 Intersection Signal Delay: 41.4      Intersection LOS: D  
 Intersection Capacity Utilization 75.6%      ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 61: N Beauregard St/Beauregard St & Route 236



Phasings

61: N Beauregard St/Beauregard St & Route 236

2020 Market with Traffic Mitigation

AM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 5     | 2     | 1     | 6     | 4     | 3     | 3     | 1     | 4     | 4     |       |
| Permitted Phases        |       |       |       |       | 6     |       |       | 3     |       |       | 4     |
| Minimum Initial (s)     | 8.0   | 20.0  | 8.0   | 20.0  | 8.0   | 4.0   | 4.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)       | 15.0  | 26.5  | 15.0  | 28.5  | 36.0  | 36.0  | 36.0  | 15.0  | 36.0  | 36.0  | 36.0  |
| Total Split (s)         | 28.0  | 43.0  | 15.0  | 30.0  | 36.0  | 36.0  | 36.0  | 15.0  | 36.0  | 36.0  | 36.0  |
| Total Split (%)         | 21.5% | 33.1% | 11.5% | 23.1% | 27.7% | 27.7% | 27.7% | 11.5% | 27.7% | 27.7% | 27.7% |
| Maximum Green (s)       | 21.0  | 36.5  | 8.0   | 23.5  | 29.0  | 29.0  | 29.0  | 8.0   | 29.0  | 29.0  | 29.0  |
| Yellow Time (s)         | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 2.5   | 3.0   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lead  | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | Min   | None  | Min   | None  | None  | None  | None  | None  | None  | None  |
| Walk Time (s)           |       |       |       | 7.0   | 7.0   | 7.0   | 7.0   |       | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |       |       | 14.0  | 22.0  | 22.0  | 22.0  |       | 22.0  | 22.0  | 22.0  |
| Pedestrian Calls (#/hr) |       |       |       | 0     | 0     | 0     | 0     |       | 0     | 0     | 0     |
| 90th %ile Green (s)     | 21.0  | 36.5  | 8.0   | 23.5  | 29.0  | 29.0  | 29.0  | 8.0   | 29.0  | 29.0  | 29.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Gap   | Gap   | Max   | Max   | Max   | Max   |
| 70th %ile Green (s)     | 21.0  | 36.5  | 8.0   | 23.5  | 29.0  | 13.2  | 13.2  | 8.0   | 29.0  | 29.0  | 29.0  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Gap   | Gap   | Max   | Max   | Max   | Max   |
| 50th %ile Green (s)     | 21.0  | 36.5  | 8.0   | 23.5  | 29.0  | 11.5  | 11.5  | 8.0   | 29.0  | 29.0  | 29.0  |
| 50th %ile Term Code     | Max   | Hold  | Max   | Max   | Max   | Gap   | Gap   | Max   | Max   | Max   | Max   |
| 30th %ile Green (s)     | 21.0  | 36.5  | 8.0   | 23.5  | 29.0  | 9.7   | 9.7   | 8.0   | 29.0  | 29.0  | 29.0  |
| 30th %ile Term Code     | Max   | Hold  | Max   | Max   | Max   | Gap   | Gap   | Max   | Max   | Max   | Max   |
| 10th %ile Green (s)     | 21.0  | 51.5  | 0.0   | 23.5  | 29.0  | 7.3   | 7.3   | 0.0   | 29.0  | 29.0  | 29.0  |
| 10th %ile Term Code     | Max   | Hold  | Skip  | Max   | Max   | Gap   | Gap   | Skip  | Max   | Max   | Max   |


Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 112.5  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 116.9  
 70th %ile Actuated Cycle: 114.2  
 50th %ile Actuated Cycle: 112.5  
 30th %ile Actuated Cycle: 110.7  
 10th %ile Actuated Cycle: 108.3



Lanes and Geometrics  
67: Beauregard St & Lincolia Rd Spur

2020 Market with Traffic Mitigation  
AM PEAK

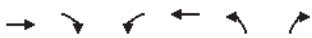


| Lane Group          | EBL  | EBT  | WBT   | WBR  | SBL  | SBR  |
|---------------------|------|------|-------|------|------|------|
| Lane Configurations |      | ↑↑   | ↑↑    |      |      |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           |      | 0%   | 0%    |      | 0%   |      |
| Storage Length (ft) | 0    |      |       | 0    | 0    | 0    |
| Storage Lanes       | 0    |      |       | 0    | 0    | 0    |
| Taper Length (ft)   | 50   |      |       |      | 50   |      |
| Lane Util. Factor   | 1.00 | 0.95 | 0.95  | 0.95 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      |       |      |      |      |
| Frt                 |      |      | 0.962 |      |      |      |
| Flt Protected       |      |      |       |      |      |      |
| Satd. Flow (prot)   | 0    | 3539 | 3405  | 0    | 0    | 0    |
| Flt Permitted       |      |      |       |      |      |      |
| Satd. Flow (perm)   | 0    | 3539 | 3405  | 0    | 0    | 0    |
| Link Speed (mph)    |      | 35   | 35    |      | 25   |      |
| Link Distance (ft)  |      | 464  | 545   |      | 446  |      |
| Travel Time (s)     |      | 9.0  | 10.6  |      | 12.2 |      |

**Intersection Summary**  
Area Type: Other

Lanes and Geometrics  
90: N Jordan St & Seminary Rd/ Seminary Rd

2020 Market with Traffic Mitigation  
AM PEAK



| Lane Group          | EBT   | EBR  | WBL  | WBT   | NBL   | NBR   |
|---------------------|-------|------|------|-------|-------|-------|
| Lane Configurations | ↑↑    |      |      | ↑↑    | ↑↑    | ↑↑    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900  |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12    |
| Grade (%)           | 0%    |      |      | 0%    | 0%    |       |
| Storage Length (ft) |       | 0    | 0    |       | 0     | 250   |
| Storage Lanes       |       | 0    | 0    |       | 1     | 1     |
| Taper Length (ft)   |       |      | 50   |       | 50    |       |
| Lane Util. Factor   | 0.95  | 0.95 | 0.95 | 0.95  | 1.00  | 1.00  |
| Ped Bike Factor     |       |      |      |       |       |       |
| Frt                 | 0.976 |      |      |       |       | 0.850 |
| Flt Protected       |       |      |      | 0.999 | 0.950 |       |
| Satd. Flow (prot)   | 3432  | 0    | 0    | 3536  | 1770  | 1583  |
| Flt Permitted       |       |      |      | 0.919 | 0.950 |       |
| Satd. Flow (perm)   | 3432  | 0    | 0    | 3253  | 1770  | 1583  |
| Right Turn on Red   |       | Yes  |      |       |       | Yes   |
| Satd. Flow (RTOR)   | 25    |      |      |       |       | 75    |
| Link Speed (mph)    | 35    |      |      | 35    | 25    |       |
| Link Distance (ft)  | 744   |      |      | 747   | 1357  |       |
| Travel Time (s)     | 14.5  |      |      | 14.6  | 37.0  |       |

**Intersection Summary**  
Area Type: Other

Timings  
90: N Jordan St & Seminary Rd/ Seminary Rd

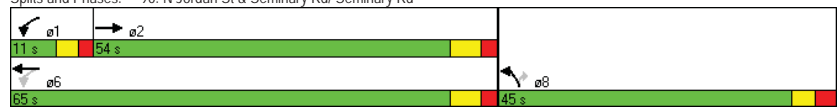
2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBT   | WBL   | WBT   | NBL   | NBR   |
|----------------------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 720   | 20    | 960   | 380   | 70    |
| Turn Type            | NA    | pm+pt | NA    | NA    | Perm  |
| Protected Phases     | 2     | 1     | 6     | 8     |       |
| Permitted Phases     |       | 6     |       |       | 8     |
| Detector Phase       | 2     | 1     | 6     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 10.0  | 6.0   | 16.0  | 6.0   | 6.0   |
| Minimum Split (s)    | 30.5  | 11.0  | 30.5  | 22.0  | 22.0  |
| Total Split (s)      | 54.0  | 11.0  | 65.0  | 45.0  | 45.0  |
| Total Split (%)      | 49.1% | 10.0% | 59.1% | 40.9% | 40.9% |
| Yellow Time (s)      | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.5   | 2.0   | 2.5   | 3.0   | 3.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.5   | 5.0   | 6.5   | 6.0   | 6.0   |
| Lead/Lag             | Lag   | Lead  |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |
| Recall Mode          | C-Max | None  | C-Max | None  | None  |
| Act Effct Green (s)  | 66.8  |       | 66.8  | 30.7  | 30.7  |
| Actuated g/C Ratio   | 0.61  |       | 0.61  | 0.28  | 0.28  |
| v/c Ratio            | 0.44  |       | 0.53  | 0.83  | 0.15  |
| Control Delay        | 2.8   |       | 14.8  | 51.0  | 6.5   |
| Queue Delay          | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Total Delay          | 2.8   |       | 14.8  | 51.0  | 6.5   |
| LOS                  | A     |       | B     | D     | A     |
| Approach Delay       | 2.8   |       | 14.8  | 44.1  |       |
| Approach LOS         | A     |       | B     | D     |       |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 101 (92%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.83  
 Intersection Signal Delay: 16.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 72.3%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 90: N Jordan St & Seminary Rd/ Seminary Rd



Phasings  
90: N Jordan St & Seminary Rd/ Seminary Rd

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group              | EBT   | WBL   | WBT   | NBL   | NBR   |
|-------------------------|-------|-------|-------|-------|-------|
| Protected Phases        | 2     | 1     | 6     | 8     |       |
| Permitted Phases        |       | 6     |       |       | 8     |
| Minimum Initial (s)     | 10.0  | 6.0   | 16.0  | 6.0   | 6.0   |
| Minimum Split (s)       | 30.5  | 11.0  | 30.5  | 22.0  | 22.0  |
| Total Split (s)         | 54.0  | 11.0  | 65.0  | 45.0  | 45.0  |
| Total Split (%)         | 49.1% | 10.0% | 59.1% | 40.9% | 40.9% |
| Maximum Green (s)       | 47.5  | 6.0   | 58.5  | 39.0  | 39.0  |
| Yellow Time (s)         | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.5   | 2.0   | 2.5   | 3.0   | 3.0   |
| Lead/Lag                | Lag   | Lead  |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | C-Max | None  | C-Max | None  | None  |
| Walk Time (s)           | 12.0  |       | 12.0  | 4.0   | 4.0   |
| Flash Dont Walk (s)     | 12.0  |       | 12.0  | 12.0  | 12.0  |
| Pedestrian Calls (#/hr) | 0     |       | 0     | 0     | 0     |
| 90th %ile Green (s)     | 58.5  | 0.0   | 58.5  | 39.0  | 39.0  |
| 90th %ile Term Code     | Coord | Skip  | Coord | Max   | Max   |
| 70th %ile Green (s)     | 62.9  | 0.0   | 62.9  | 34.6  | 34.6  |
| 70th %ile Term Code     | Coord | Skip  | Coord | Gap   | Gap   |
| 50th %ile Green (s)     | 66.5  | 0.0   | 66.5  | 31.0  | 31.0  |
| 50th %ile Term Code     | Coord | Skip  | Coord | Gap   | Gap   |
| 30th %ile Green (s)     | 70.2  | 0.0   | 70.2  | 27.3  | 27.3  |
| 30th %ile Term Code     | Coord | Skip  | Coord | Gap   | Gap   |
| 10th %ile Green (s)     | 75.7  | 0.0   | 75.7  | 21.8  | 21.8  |
| 10th %ile Term Code     | Coord | Skip  | Coord | Gap   | Gap   |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 101 (92%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow  
 Control Type: Actuated-Coordinated

Lanes and Geometrics 2020 Market with Traffic Mitigation  
AM PEAK  
93: Hammond M.S./Encore Apts & Seminary Rd

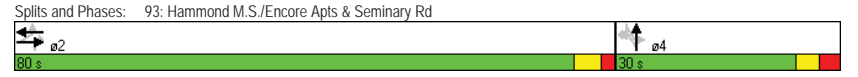
| Lane Group          | EBL   | EBT  | EBR  | WBL  | WBT   | WBR  | NBL  | NBT   | NBR   | SBL   | SBT  | SBR   |
|---------------------|-------|------|------|------|-------|------|------|-------|-------|-------|------|-------|
| Lane Configurations | ↔     | ↔↔↔  |      | ↔    | ↔↔    |      |      | ↔     | ↔     | ↔     |      | ↔     |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12   | 12   | 12   | 12    | 12   | 12   | 12    | 12    | 12    | 12   | 12    |
| Grade (%)           |       | 0%   |      |      | 0%    |      |      | 0%    |       |       | 0%   |       |
| Storage Length (ft) | 100   |      | 0    | 0    |       | 0    | 0    |       | 0     | 0     |      | 0     |
| Storage Lanes       | 1     |      | 0    | 0    |       | 0    | 0    |       | 1     | 1     |      | 1     |
| Taper Length (ft)   | 50    |      |      | 50   |       |      | 50   |       |       | 50    |      |       |
| Lane Util. Factor   | 1.00  | 0.91 | 1.00 | 1.00 | 0.95  | 0.95 | 1.00 | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  |
| Ped Bike Factor     |       |      |      |      | 0.999 |      |      |       | 0.850 |       |      | 0.850 |
| Frt Protected       | 0.950 |      |      |      |       |      |      | 0.950 |       | 0.950 |      |       |
| Satd. Flow (prot)   | 1770  | 5085 | 0    | 0    | 3536  | 0    | 0    | 1770  | 1583  | 1770  | 0    | 1583  |
| Frt Permitted       | 0.157 |      |      |      |       |      |      | 0.950 |       | 0.740 |      |       |
| Satd. Flow (perm)   | 292   | 5085 | 0    | 0    | 3536  | 0    | 0    | 1770  | 1583  | 1378  | 0    | 1583  |
| Right Turn on Red   |       |      | Yes  |      |       | Yes  |      |       | Yes   |       |      | Yes   |
| Satd. Flow (RTOR)   |       |      |      |      | 1     |      |      |       | 5     |       |      | 48    |
| Link Speed (mph)    |       | 35   |      |      |       | 35   |      |       | 25    |       |      | 25    |
| Link Distance (ft)  |       | 464  |      |      | 317   |      |      | 257   |       |       |      | 372   |
| Travel Time (s)     |       | 9.0  |      |      | 6.2   |      |      | 7.0   |       |       |      | 10.1  |

**Intersection Summary**  
Area Type: Other

Timings 2020 Market with Traffic Mitigation  
AM PEAK  
93: Hammond M.S./Encore Apts & Seminary Rd

| Lane Group           | EBL   | EBT   | WBT   | NBT   | NBR    | SBL   | SBR    |
|----------------------|-------|-------|-------|-------|--------|-------|--------|
| Lane Configurations  | ↔     | ↔↔↔   | ↔↔    | ↔     | ↔      | ↔     | ↔      |
| Volume (vph)         | 15    | 815   | 1385  | 0     | 5      | 35    | 45     |
| Turn Type            | Perm  | NA    | NA    | NA    | custom | D.Pm  | custom |
| Protected Phases     |       | 2     | 2     | 4     |        | 2     | 4      |
| Permitted Phases     | 2     |       |       |       | 2      | 4     | 4      |
| Detector Phase       | 2     | 2     | 2     | 4     | 2      | 4     | 4      |
| Switch Phase         |       |       |       |       |        |       |        |
| Minimum Initial (s)  | 10.0  | 10.0  | 10.0  | 6.0   | 10.0   | 6.0   | 6.0    |
| Minimum Split (s)    | 21.5  | 21.5  | 21.5  | 29.0  | 21.5   | 29.0  | 29.0   |
| Total Split (s)      | 80.0  | 80.0  | 80.0  | 30.0  | 80.0   | 30.0  | 30.0   |
| Total Split (%)      | 72.7% | 72.7% | 72.7% | 27.3% | 72.7%  | 27.3% | 27.3%  |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.0   | 3.5    | 3.0   | 3.0    |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 3.0   | 2.0    | 3.0   | 3.0    |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0    | 0.0   | 0.0    |
| Total Lost Time (s)  | 5.5   | 5.5   | 5.5   | 6.0   | 5.5    | 6.0   | 6.0    |
| Lead/Lag             |       |       |       |       |        |       |        |
| Lead-Lag Optimize?   |       |       |       |       |        |       |        |
| Recall Mode          | C-Max | C-Max | C-Max | None  | C-Max  | None  | None   |
| Act Effct Green (s)  | 93.4  | 93.4  | 93.4  | 8.6   | 93.4   | 8.6   | 8.6    |
| Actuated g/C Ratio   | 0.85  | 0.85  | 0.85  | 0.08  | 0.85   | 0.08  | 0.08   |
| v/c Ratio            | 0.06  | 0.20  | 0.50  | 0.19  | 0.00   | 0.35  | 0.29   |
| Control Delay        | 2.8   | 2.2   | 1.3   | 49.5  | 1.4    | 56.2  | 17.7   |
| Queue Delay          | 0.0   | 0.0   | 0.4   | 0.0   | 0.0    | 0.0   | 0.0    |
| Total Delay          | 2.8   | 2.2   | 1.6   | 49.5  | 1.4    | 56.2  | 17.7   |
| LOS                  | A     | A     | A     | D     | A      | E     | B      |
| Approach Delay       |       | 2.2   | 1.6   | 42.0  |        |       |        |
| Approach LOS         |       | A     | A     | D     |        |       |        |

**Intersection Summary**  
Cycle Length: 110  
Actuated Cycle Length: 110  
Offset: 102 (93%), Referenced to phase 2:WBEB, Start of Yellow  
Natural Cycle: 65  
Control Type: Actuated-Coordinated  
Maximum v/c Ratio: 0.50  
Intersection Signal Delay: 3.5 Intersection LOS: A  
Intersection Capacity Utilization 63.0% ICU Level of Service B  
Analysis Period (min) 15



Phasings

2020 Market with Traffic Mitigation  
AM PEAK

93: Hammond M.S./Encore Apts & Seminary Rd

| Lane Group              | EBL   | EBT   | WBT   | NBT   | NBR   | SBL   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 2     | 2     | 4     |       |       |       |
| Permitted Phases        | 2     |       |       |       | 2     | 4     | 4     |
| Minimum Initial (s)     | 10.0  | 10.0  | 10.0  | 6.0   | 10.0  | 6.0   | 6.0   |
| Minimum Split (s)       | 21.5  | 21.5  | 21.5  | 29.0  | 21.5  | 29.0  | 29.0  |
| Total Split (s)         | 80.0  | 80.0  | 80.0  | 30.0  | 80.0  | 30.0  | 30.0  |
| Total Split (%)         | 72.7% | 72.7% | 72.7% | 27.3% | 72.7% | 27.3% | 27.3% |
| Maximum Green (s)       | 74.5  | 74.5  | 74.5  | 24.0  | 74.5  | 24.0  | 24.0  |
| Yellow Time (s)         | 3.5   | 3.5   | 3.5   | 3.0   | 3.5   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   |
| Lead/Lag                |       |       |       |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | C-Max | C-Max | C-Max | None  | C-Max | None  | None  |
| Walk Time (s)           |       |       |       | 7.0   |       | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |       |       | 16.0  |       | 16.0  | 16.0  |
| Pedestrian Calls (#/hr) |       |       |       | 0     |       | 0     | 0     |
| 90th %ile Green (s)     | 86.6  | 86.6  | 86.6  | 11.9  | 86.6  | 11.9  | 11.9  |
| 90th %ile Term Code     | Coord | Coord | Coord | Gap   | Coord | Gap   | Gap   |
| 70th %ile Green (s)     | 88.6  | 88.6  | 88.6  | 9.9   | 88.6  | 9.9   | 9.9   |
| 70th %ile Term Code     | Coord | Coord | Coord | Gap   | Coord | Gap   | Gap   |
| 50th %ile Green (s)     | 90.1  | 90.1  | 90.1  | 8.4   | 90.1  | 8.4   | 8.4   |
| 50th %ile Term Code     | Coord | Coord | Coord | Gap   | Coord | Gap   | Gap   |
| 30th %ile Green (s)     | 91.6  | 91.6  | 91.6  | 6.9   | 91.6  | 6.9   | 6.9   |
| 30th %ile Term Code     | Coord | Coord | Coord | Gap   | Coord | Gap   | Gap   |
| 10th %ile Green (s)     | 104.5 | 104.5 | 104.5 | 0.0   | 104.5 | 0.0   | 0.0   |
| 10th %ile Term Code     | Coord | Coord | Coord | Skip  | Coord | Skip  | Skip  |

Intersection Summary

|  |
|--|
| Cycle Length: 110  |
| Actuated Cycle Length: 110                                     |
| Offset: 102 (93%), Referenced to phase 2:WBEB, Start of Yellow |
| Control Type: Actuated-Coordinated                             |

Lanes and Geometrics

2020 Market with Traffic Mitigation  
AM PEAK

100: South HOV Ramp & Seminary Rd

| Lane Group          | EBT  | EBR  | WBL  | WBT  | NBL   | NBR  |
|---------------------|------|------|------|------|-------|------|
| Lane Configurations | ↑↑   |      |      | ↑↑   | ↑     |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12   | 12   | 12   | 12    | 12   |
| Grade (%)           | 0%   |      |      | 0%   | 0%    |      |
| Storage Length (ft) |      | 0    | 0    |      | 0     | 0    |
| Storage Lanes       |      | 0    | 0    |      | 1     | 0    |
| Taper Length (ft)   |      |      | 50   |      | 50    |      |
| Lane Util. Factor   | 0.95 | 0.95 | 0.95 | 0.95 | 1.00  | 1.00 |
| Ped Bike Factor     |      |      |      |      |       |      |
| Frt                 |      |      |      |      | 0.965 |      |
| Flt Protected       |      |      |      |      | 0.964 |      |
| Satd. Flow (prot)   | 3539 | 0    | 0    | 3539 | 1733  | 0    |
| Flt Permitted       |      |      |      |      | 0.964 |      |
| Satd. Flow (perm)   | 3539 | 0    | 0    | 3539 | 1733  | 0    |
| Right Turn on Red   |      | Yes  |      |      |       | Yes  |
| Satd. Flow (RTOR)   |      |      |      |      | 23    |      |
| Link Speed (mph)    | 35   |      |      | 35   | 30    |      |
| Link Distance (ft)  | 824  |      |      | 403  | 671   |      |
| Travel Time (s)     | 16.1 |      |      | 7.9  | 15.3  |      |

Intersection Summary

|            |       |
|------------|-------|
| Area Type: | Other |
|------------|-------|

Timings  
100: South HOV Ramp & Seminary Rd

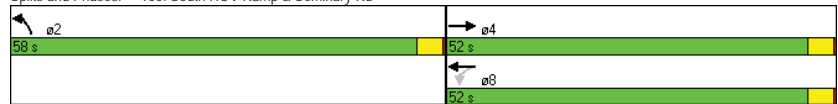
2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBT   | WBT   | NBL   |
|----------------------|-------|-------|-------|
| Lane Configurations  | ↔↔    | ↔↔    | ↔     |
| Volume (vph)         | 480   | 965   | 400   |
| Turn Type            | NA    | NA    | NA    |
| Protected Phases     | 4     | 8     | 2     |
| Permitted Phases     |       |       |       |
| Detector Phase       | 4     | 8     | 2     |
| Switch Phase         |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 20.0  | 20.0  | 20.0  |
| Total Split (s)      | 52.0  | 52.0  | 58.0  |
| Total Split (%)      | 47.3% | 47.3% | 52.7% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)     | 0.5   | 0.5   | 0.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   |
| Lead/Lag             |       |       |       |
| Lead-Lag Optimize?   |       |       |       |
| Recall Mode          | C-Max | C-Max | Max   |
| Act Effct Green (s)  | 48.0  | 48.0  | 54.0  |
| Actuated g/C Ratio   | 0.44  | 0.44  | 0.49  |
| v/c Ratio            | 0.33  | 0.67  | 0.67  |
| Control Delay        | 21.2  | 17.7  | 25.2  |
| Queue Delay          | 0.0   | 0.0   | 0.0   |
| Total Delay          | 21.2  | 17.7  | 25.2  |
| LOS                  | C     | B     | C     |
| Approach Delay       | 21.2  | 17.7  | 25.2  |
| Approach LOS         | C     | B     | C     |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 76 (69%), Referenced to phase 4:EBT and 8:WBT, Start of Green  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.67  
 Intersection Signal Delay: 20.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 96.2%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 100: South HOV Ramp & Seminary Rd



Phasings  
100: South HOV Ramp & Seminary Rd

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group              | EBT   | WBT   | NBL   |
|-------------------------|-------|-------|-------|
| Protected Phases        | 4     | 8     | 2     |
| Permitted Phases        |       |       |       |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 20.0  | 20.0  | 20.0  |
| Total Split (s)         | 52.0  | 52.0  | 58.0  |
| Total Split (%)         | 47.3% | 47.3% | 52.7% |
| Maximum Green (s)       | 48.0  | 48.0  | 54.0  |
| Yellow Time (s)         | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)        | 0.5   | 0.5   | 0.5   |
| Lead/Lag                |       |       |       |
| Lead-Lag Optimize?      |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   |
| Recall Mode             | C-Max | C-Max | Max   |
| Walk Time (s)           | 5.0   | 5.0   | 5.0   |
| Flash Dont Walk (s)     | 11.0  | 11.0  | 11.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     |
| 90th %ile Green (s)     | 48.0  | 48.0  | 54.0  |
| 90th %ile Term Code     | Coord | Coord | MaxR  |
| 70th %ile Green (s)     | 48.0  | 48.0  | 54.0  |
| 70th %ile Term Code     | Coord | Coord | MaxR  |
| 50th %ile Green (s)     | 48.0  | 48.0  | 54.0  |
| 50th %ile Term Code     | Coord | Coord | MaxR  |
| 30th %ile Green (s)     | 48.0  | 48.0  | 54.0  |
| 30th %ile Term Code     | Coord | Coord | MaxR  |
| 10th %ile Green (s)     | 48.0  | 48.0  | 54.0  |
| 10th %ile Term Code     | Coord | Coord | MaxR  |

Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 76 (69%), Referenced to phase 4:EBT and 8:WBT, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
106: Seminary Rd (N) & North HOV Ramp

2020 Market with Traffic Mitigation  
AM PEAK



| Lane Group          | EBL  | EBT  | WBT   | WBR  | SBL  | SBR  |
|---------------------|------|------|-------|------|------|------|
| Lane Configurations |      |      | ↑↑↑   |      |      | ↑    |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           |      | 0%   | 0%    |      | 0%   |      |
| Storage Length (ft) | 0    |      |       | 0    | 0    | 0    |
| Storage Lanes       | 0    |      |       | 0    | 0    | 1    |
| Taper Length (ft)   | 50   |      |       |      | 50   |      |
| Lane Util. Factor   | 1.00 | 1.00 | 0.91  | 0.91 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      |       |      |      |      |
| Frt                 |      |      | 0.962 |      |      |      |
| Flt Protected       |      |      |       |      |      |      |
| Satd. Flow (prot)   | 0    | 0    | 4892  | 0    | 0    | 1863 |
| Flt Permitted       |      |      |       |      |      |      |
| Satd. Flow (perm)   | 0    | 0    | 4892  | 0    | 0    | 1863 |
| Link Speed (mph)    |      | 35   | 35    |      | 30   |      |
| Link Distance (ft)  |      | 149  | 130   |      | 585  |      |
| Travel Time (s)     |      | 2.9  | 2.5   |      | 13.3 |      |

Intersection Summary

Area Type: Other

Lanes and Geometrics  
111: Van Dorn St & Library Ln Ext

2020 Market with Traffic Mitigation  
AM PEAK



| Lane Group          | WBL   | WBR   | NBT  | NBR   | SBL   | SBT  |
|---------------------|-------|-------|------|-------|-------|------|
| Lane Configurations | ↑     | ↑     | ↑↑   | ↑     | ↑     | ↑↑   |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           | 0%    |       | 0%   |       |       | 0%   |
| Storage Length (ft) | 100   | 0     |      | 250   | 100   |      |
| Storage Lanes       | 1     | 1     |      | 1     | 1     |      |
| Taper Length (ft)   | 50    |       |      |       | 50    |      |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95 | 1.00  | 1.00  | 0.95 |
| Ped Bike Factor     |       |       |      |       |       |      |
| Frt                 |       | 0.850 |      | 0.850 |       |      |
| Flt Protected       | 0.950 |       |      |       | 0.950 |      |
| Satd. Flow (prot)   | 1770  | 1583  | 3539 | 1583  | 1770  | 3539 |
| Flt Permitted       | 0.950 |       |      |       | 0.047 |      |
| Satd. Flow (perm)   | 1770  | 1583  | 3539 | 1583  | 88    | 3539 |
| Right Turn on Red   |       | Yes   |      | Yes   |       |      |
| Satd. Flow (RTOR)   |       | 43    |      | 366   |       |      |
| Link Speed (mph)    | 35    |       | 35   |       | 35    |      |
| Link Distance (ft)  | 665   |       | 1898 |       | 652   |      |
| Travel Time (s)     | 13.0  |       | 37.0 |       | 12.7  |      |

Intersection Summary

Area Type: Other

**Timings**  
**111: Van Dorn St & Library Ln Ext**

2020 Market with Traffic Mitigation  
 AM PEAK

| Lane Group           | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↑↑    | ↔     | ↔     | ↑↑    |
| Volume (vph)         | 85    | 40    | 2055  | 360   | 50    | 350   |
| Turn Type            | NA    | Perm  | NA    | Perm  | pm+pt | NA    |
| Protected Phases     | 8     |       | 2     |       | 1     | 6     |
| Permitted Phases     |       | 8     |       | 2     | 6     |       |
| Detector Phase       | 8     | 8     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 21.0  | 21.0  | 22.0  | 22.0  | 9.0   | 22.0  |
| Total Split (s)      | 21.0  | 21.0  | 80.0  | 80.0  | 9.0   | 89.0  |
| Total Split (%)      | 19.1% | 19.1% | 72.7% | 72.7% | 8.2%  | 80.9% |
| Yellow Time (s)      | 3.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.0   | 5.0   | 6.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       | Lag   | Lag   | Lead  |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |
| Recall Mode          | None  | None  | C-Max | C-Max | None  | C-Max |
| Act Effct Green (s)  | 11.0  | 11.0  | 82.9  | 82.9  | 91.4  | 91.6  |
| Actuated g/C Ratio   | 0.10  | 0.10  | 0.75  | 0.75  | 0.83  | 0.83  |
| v/c Ratio            | 0.52  | 0.22  | 0.83  | 0.30  | 0.34  | 0.13  |
| Control Delay        | 56.6  | 15.7  | 16.1  | 1.5   | 17.2  | 1.7   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 56.6  | 15.7  | 16.1  | 1.5   | 17.2  | 1.7   |
| LOS                  | E     | B     | B     | A     | B     | A     |
| Approach Delay       | 43.5  |       | 14.0  |       |       | 3.6   |
| Approach LOS         | D     |       | B     |       |       | A     |

**Intersection Summary**  
 Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 32 (29%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.83  
 Intersection Signal Delay: 13.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 70.7%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 111: Van Dorn St & Library Ln Ext



**Phasings**  
**111: Van Dorn St & Library Ln Ext**

2020 Market with Traffic Mitigation  
 AM PEAK

| Lane Group              | WBL   | WBR   | NBT   | NBR   | SBL  | SBT   |
|-------------------------|-------|-------|-------|-------|------|-------|
| Protected Phases        | 8     |       | 2     |       | 1    | 6     |
| Permitted Phases        |       | 8     |       | 2     | 6    |       |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0  | 4.0   |
| Minimum Split (s)       | 21.0  | 21.0  | 22.0  | 22.0  | 9.0  | 22.0  |
| Total Split (s)         | 21.0  | 21.0  | 80.0  | 80.0  | 9.0  | 89.0  |
| Total Split (%)         | 19.1% | 19.1% | 72.7% | 72.7% | 8.2% | 80.9% |
| Maximum Green (s)       | 16.0  | 16.0  | 74.0  | 74.0  | 4.0  | 83.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 4.0   | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.0  | 2.0   |
| Lead/Lag                |       |       | Lag   | Lag   | Lead |       |
| Lead-Lag Optimize?      |       |       |       |       |      |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None  | None  | C-Max | C-Max | None | C-Max |
| Walk Time (s)           | 5.0   | 5.0   | 5.0   | 5.0   |      | 5.0   |
| Flash Dont Walk (s)     | 11.0  | 11.0  | 11.0  | 11.0  |      | 11.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     |      | 0     |
| 90th %ile Green (s)     | 15.2  | 15.2  | 74.0  | 74.0  | 4.8  | 83.8  |
| 90th %ile Term Code     | Gap   | Gap   | Coord | Coord | Max  | Coord |
| 70th %ile Green (s)     | 12.7  | 12.7  | 74.8  | 74.8  | 6.5  | 86.3  |
| 70th %ile Term Code     | Gap   | Gap   | Coord | Coord | Gap  | Coord |
| 50th %ile Green (s)     | 11.0  | 11.0  | 76.9  | 76.9  | 6.1  | 88.0  |
| 50th %ile Term Code     | Gap   | Gap   | Coord | Coord | Gap  | Coord |
| 30th %ile Green (s)     | 9.2   | 9.2   | 79.0  | 79.0  | 5.8  | 89.8  |
| 30th %ile Term Code     | Gap   | Gap   | Coord | Coord | Gap  | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   | 104.0 | 104.0 | 0.0  | 104.0 |
| 10th %ile Term Code     | Skip  | Skip  | Coord | Coord | Skip | Coord |

**Intersection Summary**  
 Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 32 (29%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
114: Kenmore Ave & Seminary Rd

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL  | WBT   | WBR  | NBL   | NBT  | NBR   | SBL  | SBT   | SBR  |
|---------------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|
| Lane Configurations |       |      |       |      |       |      |       |      |       |      |       |      |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12   | 12    | 12   | 12    | 12   | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |      | 0%    |      | 0%    |      | 0%    |      | 0%    |      | 0%    |      |
| Storage Length (ft) | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    |
| Storage Lanes       | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 1    | 0     | 0    | 0     | 1    |
| Taper Length (ft)   | 50    |      |       | 50   |       |      | 50    |      |       | 50   |       |      |
| Lane Util. Factor   | 1.00  | 0.91 | 0.91  | 1.00 | 0.91  | 0.91 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 |
| Ped Bike Factor     | 0.986 |      | 0.995 |      | 0.865 |      | 0.865 |      | 0.865 |      | 0.865 |      |
| Flt Protected       |       |      |       |      |       |      |       |      |       |      |       |      |
| Satd. Flow (prot)   | 0     | 5014 | 0     | 0    | 5060  | 0    | 0     | 0    | 1611  | 0    | 0     | 1611 |
| Flt Permitted       |       |      |       |      |       |      |       |      |       |      |       |      |
| Satd. Flow (perm)   | 0     | 5014 | 0     | 0    | 5060  | 0    | 0     | 0    | 1611  | 0    | 0     | 1611 |
| Link Speed (mph)    | 35    |      | 35    |      | 25    |      | 25    |      | 25    |      | 25    |      |
| Link Distance (ft)  | 195   |      | 277   |      | 600   |      | 463   |      | 463   |      | 463   |      |
| Travel Time (s)     | 3.8   |      | 5.4   |      | 16.4  |      | 12.6  |      | 12.6  |      | 12.6  |      |

**Intersection Summary**  
Area Type: Other

Lanes and Geometrics  
191: I-395 SB On-Ramp & Seminary Rd (S)

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL  | WBT   | WBR  | NBL   | NBT  | NBR   | SBL  | SBT   | SBR  |
|---------------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|
| Lane Configurations |       |      |       |      |       |      |       |      |       |      |       |      |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12   | 12    | 12   | 12    | 12   | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |      | 0%    |      | 0%    |      | 0%    |      | 0%    |      | 0%    |      |
| Storage Length (ft) | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    |
| Storage Lanes       | 1     | 1    | 0     | 0    | 0     | 0    | 0     | 0    | 1     | 0    | 0     | 0    |
| Taper Length (ft)   | 50    |      |       | 50   |       |      | 50    |      |       | 50   |       |      |
| Lane Util. Factor   | 1.00  | 0.91 | 0.91  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00  | 0.91 | 0.91  | 1.00 |
| Ped Bike Factor     | 0.976 |      | 0.850 |      | 0.950 |      | 0.990 |      | 0.950 |      | 0.990 |      |
| Flt Protected       |       |      |       |      |       |      |       |      |       |      |       |      |
| Satd. Flow (prot)   | 0     | 3309 | 1441  | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 1610  | 3356 |
| Flt Permitted       |       |      |       |      |       |      |       |      |       |      |       |      |
| Satd. Flow (perm)   | 0     | 3309 | 1441  | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 1610  | 3356 |
| Right Turn on Red   | Yes   |      | Yes   |      | Yes   |      | Yes   |      | Yes   |      | Yes   |      |
| Satd. Flow (RTOR)   | 14    |      | 301   |      | 23    |      | 23    |      | 23    |      | 23    |      |
| Link Speed (mph)    | 35    |      | 35    |      | 35    |      | 35    |      | 35    |      | 35    |      |
| Link Distance (ft)  | 371   |      | 307   |      | 340   |      | 280   |      | 280   |      | 280   |      |
| Travel Time (s)     | 7.2   |      | 6.0   |      | 6.6   |      | 5.5   |      | 5.5   |      | 5.5   |      |

**Intersection Summary**  
Area Type: Other



Timings  
191: I-395 SB On-Ramp & Seminary Rd (S)

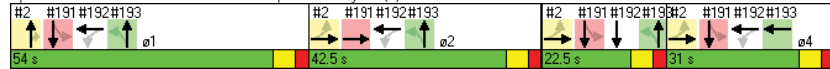
2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group           | EBT   | EBR   | SBL   | SBT   | ø1   | ø3   | ø4   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  | ↕↕    | ↕     | ↕     | ↕↕    |      |      |      |
| Volume (vph)         | 680   | 490   | 245   | 285   |      |      |      |
| Turn Type            | NA    | Free  | Perm  | NA    |      |      |      |
| Protected Phases     | 2     |       | 1 3 4 | 1 3 4 | 1    | 3    | 4    |
| Permitted Phases     |       | Free  | 1 3 4 |       |      |      |      |
| Detector Phase       | 2     |       | 1 3 4 | 1 3 4 |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  | 10.0  |       |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    | 22.5  |       |       |       | 22.5 | 22.5 | 23.0 |
| Total Split (s)      | 42.5  | 0.0   | 107.5 | 107.5 | 54.0 | 22.5 | 31.0 |
| Total Split (%)      | 28.3% | 0.0%  | 71.7% | 71.7% | 36%  | 15%  | 21%  |
| Yellow Time (s)      | 4.0   |       |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     | 2.5   |       |       |       | 2.5  | 2.5  | 3.0  |
| Lost Time Adjust (s) | -2.5  | 0.0   | -2.5  | -2.5  |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             | Lag   |       |       |       | Lead | Lead | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          | Min   |       |       |       | Min  | Min  | Min  |
| Act Effct Green (s)  | 38.5  | 150.0 | 103.5 | 103.5 |      |      |      |
| Actuated g/C Ratio   | 0.26  | 1.00  | 0.69  | 0.69  |      |      |      |
| v/c Ratio            | 1.02  | 0.27  | 0.16  | 0.17  |      |      |      |
| Control Delay        | 88.0  | 0.5   | 3.5   | 7.8   |      |      |      |
| Queue Delay          | 0.0   | 0.0   | 5.0   | 0.5   |      |      |      |
| Total Delay          | 88.0  | 0.5   | 8.5   | 8.2   |      |      |      |
| LOS                  | F     | A     | A     | A     |      |      |      |
| Approach Delay       | 61.2  |       |       | 8.3   |      |      |      |
| Approach LOS         | E     |       |       | A     |      |      |      |

Intersection Summary

|   |                        |
|---|------------------------|
| Cycle Length: 150                       |                        |
| Actuated Cycle Length: 150              |                        |
| Natural Cycle: 115                      |                        |
| Control Type: Actuated-Uncoordinated    |                        |
| Maximum v/c Ratio: 1.02                 |                        |
| Intersection Signal Delay: 44.7         | Intersection LOS: D    |
| Intersection Capacity Utilization 40.7% | ICU Level of Service A |
| Analysis Period (min) 15                |                        |

Splits and Phases: 191: I-395 SB On-Ramp & Seminary Rd (S)



Phasings  
191: I-395 SB On-Ramp & Seminary Rd (S)

2020 Market with Traffic Mitigation  
AM PEAK

| Lane Group              | EBT   | EBR  | SBL   | SBT   | ø1   | ø3   | ø4   |
|-------------------------|-------|------|-------|-------|------|------|------|
| Protected Phases        | 2     |      |       | 1 3 4 | 1    | 3    | 4    |
| Permitted Phases        |       | Free | 1 3 4 |       |      |      |      |
| Minimum Initial (s)     | 10.0  |      |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       | 22.5  |      |       |       | 22.5 | 22.5 | 23.0 |
| Total Split (s)         | 42.5  | 0.0  | 107.5 | 107.5 | 54.0 | 22.5 | 31.0 |
| Total Split (%)         | 28.3% | 0.0% | 71.7% | 71.7% | 36%  | 15%  | 21%  |
| Maximum Green (s)       | 36.0  |      |       |       | 47.5 | 16.0 | 24.0 |
| Yellow Time (s)         | 4.0   |      |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        | 2.5   |      |       |       | 2.5  | 2.5  | 3.0  |
| Lead/Lag                | Lag   |      |       |       | Lead | Lead | Lag  |
| Lead-Lag Optimize?      |       |      |       |       |      |      |      |
| Vehicle Extension (s)   | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Minimum Gap (s)         | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Recall Mode             | Min   |      |       |       | Min  | Min  | Min  |
| Walk Time (s)           |       |      |       |       |      |      |      |
| Flash Dont Walk (s)     |       |      |       |       |      |      |      |
| Pedestrian Calls (#/hr) |       |      |       |       |      |      |      |
| 90th %ile Green (s)     | 36.0  |      |       |       | 47.5 | 16.0 | 24.0 |
| 90th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 70th %ile Green (s)     | 36.0  |      |       |       | 47.5 | 16.0 | 24.0 |
| 70th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 50th %ile Green (s)     | 36.0  |      |       |       | 47.5 | 16.0 | 24.0 |
| 50th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 30th %ile Green (s)     | 36.0  |      |       |       | 47.5 | 16.0 | 24.0 |
| 30th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 10th %ile Green (s)     | 36.0  |      |       |       | 47.5 | 16.0 | 24.0 |
| 10th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |

Intersection Summary

|                                      |
|--------------------------------------|
| Cycle Length: 150                    |
| Actuated Cycle Length: 150           |
| Control Type: Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: 150        |
| 70th %ile Actuated Cycle: 150        |
| 50th %ile Actuated Cycle: 150        |
| 30th %ile Actuated Cycle: 150        |
| 10th %ile Actuated Cycle: 150        |

Lanes and Geometrics 2020 Market with Traffic Mitigation  
AM PEAK  
192: I-395 SB On-Ramp/I-395 SB Off-Ramp & Seminary Rd (N)

| Lane Group          | EBL  | EBT  | EBR  | WBL   | WBT   | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR   |
|---------------------|------|------|------|-------|-------|------|------|------|------|------|------|-------|
| Lane Configurations |      |      |      | ↔     | ↔     |      |      |      |      |      | ↔    | ↔     |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12   | 12   | 12    | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12    |
| Grade (%)           | 0%   |      |      | 0%    |       |      | 0%   |      |      | 0%   |      |       |
| Storage Length (ft) | 0    |      | 0    | 0     |       | 0    | 0    |      | 0    | 0    |      | 600   |
| Storage Lanes       | 0    |      | 0    | 1     |       | 0    | 0    |      | 0    | 0    |      | 1     |
| Taper Length (ft)   | 50   |      |      | 50    |       |      | 50   |      |      | 50   |      |       |
| Lane Util. Factor   | 1.00 | 1.00 | 1.00 | 0.91  | 0.91  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00  |
| Ped Bike Factor     | Frt  |      |      |       |       |      |      |      |      |      |      |       |
|                     |      |      |      |       |       |      |      |      |      |      |      | 0.850 |
| Flt Protected       |      |      |      | 0.950 | 0.998 |      |      |      |      |      |      |       |
| Satd. Flow (prot)   | 0    | 0    | 0    | 1610  | 3383  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583  |
| Flt Permitted       |      |      |      | 0.950 | 0.998 |      |      |      |      |      |      |       |
| Satd. Flow (perm)   | 0    | 0    | 0    | 1610  | 3383  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583  |
| Right Turn on Red   | Yes  |      |      | Yes   |       | Yes  |      |      |      | Yes  |      | Yes   |
| Satd. Flow (RTOR)   |      |      |      | 63    | 8     |      |      |      |      |      |      | 337   |
| Link Speed (mph)    | 30   |      |      | 35    |       | 35   |      |      | 35   |      |      |       |
| Link Distance (ft)  | 430  |      |      | 149   |       | 280  |      |      | 1465 |      |      |       |
| Travel Time (s)     | 9.8  |      |      | 2.9   |       | 5.5  |      |      | 28.5 |      |      |       |

**Intersection Summary**  
Area Type: Other

Timings 2020 Market with Traffic Mitigation  
AM PEAK  
192: I-395 SB On-Ramp/I-395 SB Off-Ramp & Seminary Rd (N)

| Lane Group           | WBL   | WBT   | SBT   | SBR   | ø1   | ø2   | ø4   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     |      |      |      |
| Volume (vph)         | 285   | 925   | 245   | 495   |      |      |      |
| Turn Type            | Perm  | NA    | NA    | Free  |      |      |      |
| Protected Phases     | 1 2 4 |       | 3     |       | 1    | 2    | 4    |
| Permitted Phases     | 1 2 4 |       | 3     | Free  |      |      |      |
| Detector Phase       | 1 2 4 |       | 3     |       |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  |       |       | 10.0  |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    |       |       | 22.5  |       | 22.5 | 22.5 | 23.0 |
| Total Split (s)      | 127.5 | 127.5 | 22.5  | 0.0   | 54.0 | 42.5 | 31.0 |
| Total Split (%)      | 85.0% | 85.0% | 15.0% | 0.0%  | 36%  | 28%  | 21%  |
| Yellow Time (s)      |       |       | 4.0   |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     |       |       | 2.5   |       | 2.5  | 2.5  | 3.0  |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | 0.0   |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             |       |       | Lead  |       | Lead | Lag  | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          |       |       | Min   |       | Min  | Min  | Min  |
| Act Effct Green (s)  | 123.5 | 123.5 | 18.5  | 150.0 |      |      |      |
| Actuated g/C Ratio   | 0.82  | 0.82  | 0.12  | 1.00  |      |      |      |
| v/c Ratio            | 0.21  | 0.37  | 0.60  | 0.34  |      |      |      |
| Control Delay        | 2.5   | 3.7   | 68.7  | 0.6   |      |      |      |
| Queue Delay          | 12.2  | 34.9  | 0.0   | 0.0   |      |      |      |
| Total Delay          | 14.7  | 38.7  | 68.7  | 0.6   |      |      |      |
| LOS                  | B     |       | D     | E     | A    |      |      |
| Approach Delay       | 33.6  |       | 23.1  |       |      |      |      |
| Approach LOS         | C     |       | C     |       |      |      |      |

**Intersection Summary**  
Cycle Length: 150  
Actuated Cycle Length: 150  
Natural Cycle Length: 115  
Control Type: Actuated-Uncoordinated  
Maximum v/c Ratio: 1.02  
Intersection Signal Delay: 29.6 Intersection LOS: C  
Intersection Capacity Utilization 39.0% ICU Level of Service A  
Analysis Period (min) 15



Phasings 2020 Market with Traffic Mitigation  
 192: I-395 SB On-Ramp/I-395 SB Off-Ramp & Seminary Rd (N) AM PEAK

| Lane Group              | WBL   | WBT   | SBT   | SBR  | ø1   | ø2   | ø4   |
|-------------------------|-------|-------|-------|------|------|------|------|
| Protected Phases        |       | 1 2 4 | 3     |      | 1    | 2    | 4    |
| Permitted Phases        | 1 2 4 |       |       | Free |      |      |      |
| Minimum Initial (s)     |       |       | 10.0  |      | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       |       |       | 22.5  |      | 22.5 | 22.5 | 23.0 |
| Total Split (s)         | 127.5 | 127.5 | 22.5  | 0.0  | 54.0 | 42.5 | 31.0 |
| Total Split (%)         | 85.0% | 85.0% | 15.0% | 0.0% | 36%  | 28%  | 21%  |
| Maximum Green (s)       |       |       | 16.0  |      | 47.5 | 36.0 | 24.0 |
| Yellow Time (s)         |       |       | 4.0   |      | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        |       |       | 2.5   |      | 2.5  | 2.5  | 3.0  |
| Lead/Lag                |       |       | Lead  |      | Lead | Lag  | Lag  |
| Lead-Lag Optimize?      |       |       |       |      |      |      |      |
| Vehicle Extension (s)   |       |       | 3.0   |      | 5.0  | 3.0  | 3.0  |
| Minimum Gap (s)         |       |       | 3.0   |      | 5.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  |       |       | 0.0   |      | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      |       |       | 0.0   |      | 0.0  | 0.0  | 0.0  |
| Recall Mode             |       |       | Min   |      | Min  | Min  | Min  |
| Walk Time (s)           |       |       |       |      |      |      |      |
| Flash Dont Walk (s)     |       |       |       |      |      |      |      |
| Pedestrian Calls (#/hr) |       |       |       |      |      |      |      |
| 90th %ile Green (s)     |       |       | 16.0  |      | 47.5 | 36.0 | 24.0 |
| 90th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |
| 70th %ile Green (s)     |       |       | 16.0  |      | 47.5 | 36.0 | 24.0 |
| 70th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |
| 50th %ile Green (s)     |       |       | 16.0  |      | 47.5 | 36.0 | 24.0 |
| 50th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |
| 30th %ile Green (s)     |       |       | 16.0  |      | 47.5 | 36.0 | 24.0 |
| 30th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |
| 10th %ile Green (s)     |       |       | 16.0  |      | 47.5 | 36.0 | 24.0 |
| 10th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |

| Intersection Summary      |                        |
|---------------------------|------------------------|
| Cycle Length:             | 150                    |
| Actuated Cycle Length:    | 150                    |
| Control Type:             | Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: | 150                    |
| 70th %ile Actuated Cycle: | 150                    |
| 50th %ile Actuated Cycle: | 150                    |
| 30th %ile Actuated Cycle: | 150                    |
| 10th %ile Actuated Cycle: | 150                    |

Lanes and Geometrics 2020 Market with Traffic Mitigation  
 193: I-395 NB Off-Ramp/I-395 NB On-Ramp & Seminary Rd (N) AM PEAK

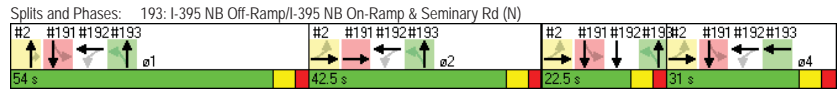
| Lane Group          | EBL  | EBT  | EBR  | WBL  | WBT  | WBR   | NBL   | NBT   | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|-------|-------|-------|------|------|------|------|
| Lane Configurations |      |      |      |      | ↑↑   | ↑↑    | ↑↑    | ↑↑    |      |      |      |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900  | 3299  | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12   | 12   | 12   | 12    | 12    | 12    | 12   | 12   | 12   | 12   |
| Grade (%)           |      | 0%   |      |      | 0%   |       |       | 0%    |      |      | 0%   |      |
| Storage Length (ft) | 0    |      | 0    | 0    |      | 125   | 0     |       | 0    | 0    |      | 0    |
| Storage Lanes       | 0    |      | 0    | 0    |      | 1     | 1     |       | 0    | 0    |      | 0    |
| Taper Length (ft)   | 50   |      |      | 50   |      |       | 50    |       |      | 50   |      |      |
| Lane Util. Factor   | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00  | 0.91  | 0.91  | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      |      |      |      |       |       |       |      |      |      |      |
| Frt                 |      |      |      |      |      | 0.850 |       |       |      |      |      |      |
| Flt Protected       |      |      |      |      |      |       | 0.950 | 0.973 |      |      |      |      |
| Satd. Flow (prot)   | 0    | 0    | 0    | 0    | 3539 | 1583  | 1610  | 3299  | 0    | 0    | 0    | 0    |
| Flt Permitted       |      |      |      |      |      |       | 0.950 | 0.973 |      |      |      |      |
| Satd. Flow (perm)   | 0    | 0    | 0    | 0    | 3539 | 1583  | 1610  | 3299  | 0    | 0    | 0    | 0    |
| Right Turn on Red   |      |      | Yes  |      |      | Yes   | Yes   |       | Yes  |      |      | Yes  |
| Satd. Flow (RTOR)   |      |      |      |      |      |       | 191   | 22    | 22   |      |      |      |
| Link Speed (mph)    |      | 35   |      |      | 35   |       |       |       | 35   |      |      | 35   |
| Link Distance (ft)  |      | 130  |      |      | 302  |       |       |       | 272  |      |      | 567  |
| Travel Time (s)     |      | 2.5  |      |      | 5.9  |       |       |       | 5.3  |      |      | 11.0 |

| Intersection Summary |       |
|----------------------|-------|
| Area Type:           | Other |

**Timings** 2020 Market with Traffic Mitigation  
AM PEAK  
193: I-395 NB Off-Ramp/I-395 NB On-Ramp & Seminary Rd (N)

| Lane Group           | WBT   | WBR   | NBL   | NBT   | ø1   | ø2   | ø3   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  | ↑↑    | ↑     | ↑     | ↑↑    |      |      |      |
| Volume (vph)         | 480   | 335   | 1140  | 465   |      |      |      |
| Turn Type            | NA    | Free  | Perm  | NA    |      |      |      |
| Protected Phases     | 4     |       | 1 2 3 | 1 2 3 | 1    | 2    | 3    |
| Permitted Phases     |       | Free  | 1 2 3 |       |      |      |      |
| Detector Phase       | 4     |       | 1 2 3 | 1 2 3 |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  | 10.0  |       |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    | 23.0  |       |       |       | 22.5 | 22.5 | 22.5 |
| Total Split (s)      | 31.0  | 0.0   | 119.0 | 119.0 | 54.0 | 42.5 | 22.5 |
| Total Split (%)      | 20.7% | 0.0%  | 79.3% | 79.3% | 36%  | 28%  | 15%  |
| Yellow Time (s)      | 4.0   |       |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     | 3.0   |       |       |       | 2.5  | 2.5  | 2.5  |
| Lost Time Adjust (s) | -3.0  | 0.0   | -2.5  | -2.5  |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             | Lag   |       |       |       | Lead | Lag  | Lead |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          | Min   |       |       |       | Min  | Min  | Min  |
| Act Effct Green (s)  | 27.0  | 150.0 | 115.0 | 115.0 |      |      |      |
| Actuated g/C Ratio   | 0.18  | 1.00  | 0.77  | 0.77  |      |      |      |
| v/c Ratio            | 0.81  | 0.23  | 0.49  | 0.44  |      |      |      |
| Control Delay        | 70.0  | 0.3   | 3.3   | 14.7  |      |      |      |
| Queue Delay          | 0.0   | 0.0   | 29.1  | 0.6   |      |      |      |
| Total Delay          | 70.0  | 0.3   | 32.4  | 15.4  |      |      |      |
| LOS                  | E     | A     | C     | B     |      |      |      |
| Approach Delay       | 41.4  |       |       | 21.4  |      |      |      |
| Approach LOS         | D     |       |       | C     |      |      |      |

| Intersection Summary               |                        |
|------------------------------------|------------------------|
| Cycle Length:                      | 150                    |
| Actuated Cycle Length:             | 150                    |
| Natural Cycle:                     | 115                    |
| Control Type:                      | Actuated-Uncoordinated |
| Maximum v/c Ratio:                 | 1.02                   |
| Intersection Signal Delay:         | 28.1                   |
| Intersection LOS:                  | C                      |
| Intersection Capacity Utilization: | 96.4%                  |
| ICU Level of Service:              | F                      |
| Analysis Period (min):             | 15                     |



**Phasings** 2020 Market with Traffic Mitigation  
AM PEAK  
193: I-395 NB Off-Ramp/I-395 NB On-Ramp & Seminary Rd (N)

| Lane Group              | WBT   | WBR  | NBL   | NBT   | ø1   | ø2   | ø3   |
|-------------------------|-------|------|-------|-------|------|------|------|
| Protected Phases        | 4     |      |       | 1 2 3 | 1    | 2    | 3    |
| Permitted Phases        |       | Free | 1 2 3 |       |      |      |      |
| Minimum Initial (s)     | 10.0  |      |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       | 23.0  |      |       |       | 22.5 | 22.5 | 22.5 |
| Total Split (s)         | 31.0  | 0.0  | 119.0 | 119.0 | 54.0 | 42.5 | 22.5 |
| Total Split (%)         | 20.7% | 0.0% | 79.3% | 79.3% | 36%  | 28%  | 15%  |
| Maximum Green (s)       | 24.0  |      |       |       | 47.5 | 36.0 | 16.0 |
| Yellow Time (s)         | 4.0   |      |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        | 3.0   |      |       |       | 2.5  | 2.5  | 2.5  |
| Lead/Lag                | Lag   |      |       |       | Lead | Lag  | Lead |
| Lead-Lag Optimize?      |       |      |       |       |      |      |      |
| Vehicle Extension (s)   | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Minimum Gap (s)         | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Recall Mode             | Min   |      |       |       | Min  | Min  | Min  |
| Walk Time (s)           |       |      |       |       |      |      |      |
| Flash Dont Walk (s)     |       |      |       |       |      |      |      |
| Pedestrian Calls (#/hr) |       |      |       |       |      |      |      |
| 90th %ile Green (s)     | 24.0  |      |       |       | 47.5 | 36.0 | 16.0 |
| 90th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 70th %ile Green (s)     | 24.0  |      |       |       | 47.5 | 36.0 | 16.0 |
| 70th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 50th %ile Green (s)     | 24.0  |      |       |       | 47.5 | 36.0 | 16.0 |
| 50th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 30th %ile Green (s)     | 24.0  |      |       |       | 47.5 | 36.0 | 16.0 |
| 30th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 10th %ile Green (s)     | 24.0  |      |       |       | 47.5 | 36.0 | 16.0 |
| 10th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |

| Intersection Summary      |                        |
|---------------------------|------------------------|
| Cycle Length:             | 150                    |
| Actuated Cycle Length:    | 150                    |
| Control Type:             | Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: | 150                    |
| 70th %ile Actuated Cycle: | 150                    |
| 50th %ile Actuated Cycle: | 150                    |
| 30th %ile Actuated Cycle: | 150                    |
| 10th %ile Actuated Cycle: | 150                    |

Lanes and Geometrics 2020 Market with Traffic Mitigation  
PM PEAK  
1: N Pickett St/N Pickett St/Fire Station & Seminary Rd

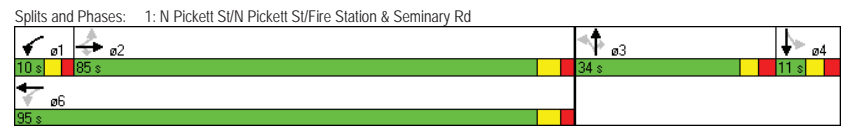
| Lane Group          | EBL  | EBT  | EBR   | WBL  | WBT   | WBR  | NBL  | NBT  | NBR   | SBL  | SBT  | SBR  |
|---------------------|------|------|-------|------|-------|------|------|------|-------|------|------|------|
| Lane Configurations |      | ↕↕   | ↕     |      | ↕↕    |      |      | ↕    | ↕     |      | ↕↕   |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900  | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12    | 12   | 12    | 12   | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           |      | 0%   |       |      | 0%    |      |      | 0%   |       |      | 0%   |      |
| Storage Length (ft) | 0    |      | 0     | 0    |       | 0    | 0    |      | 50    | 0    |      | 0    |
| Storage Lanes       | 0    |      | 1     | 0    |       | 0    | 0    |      | 1     | 0    |      | 0    |
| Taper Length (ft)   | 50   |      |       | 50   |       |      | 50   |      |       | 50   |      |      |
| Lane Util. Factor   | 0.95 | 0.95 | 1.00  | 0.95 | 0.95  | 0.95 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      |       |      |       |      |      |      | 0.98  |      |      |      |
| Frt                 |      |      | 0.850 |      |       |      |      |      | 0.850 |      |      |      |
| Flt Protected       |      |      |       |      | 0.995 |      |      |      | 0.950 |      |      |      |
| Satd. Flow (prot)   | 0    | 3539 | 1583  | 0    | 3522  | 0    | 0    | 1770 | 1583  | 0    | 1863 | 0    |
| Flt Permitted       |      |      |       |      | 0.489 |      |      |      | 0.950 |      |      |      |
| Satd. Flow (perm)   | 0    | 3539 | 1583  | 0    | 1731  | 0    | 0    | 1770 | 1554  | 0    | 1863 | 0    |
| Right Turn on Red   |      |      | Yes   |      |       | Yes  |      |      | Yes   |      |      | Yes  |
| Satd. Flow (RTOR)   |      |      | 117   |      |       |      |      |      | 59    |      |      |      |
| Link Speed (mph)    |      | 35   |       |      | 35    |      |      |      | 25    |      |      | 25   |
| Link Distance (ft)  |      | 317  |       |      | 744   |      |      |      | 657   |      |      | 269  |
| Travel Time (s)     |      | 6.2  |       |      | 14.5  |      |      |      | 17.9  |      |      | 7.3  |

**Intersection Summary**  
Area Type: Other

Timings 2020 Market with Traffic Mitigation  
PM PEAK  
1: N Pickett St/N Pickett St/Fire Station & Seminary Rd

| Lane Group           | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | NBR   | ø4   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|------|
| Lane Configurations  | ↕↕    | ↕     |       | ↕↕    |       | ↕     | ↕     |      |
| Volume (vph)         | 1415  | 135   | 115   | 1050  | 55    | 0     | 55    |      |
| Turn Type            | NA    | Perm  | pm+pt | NA    | Perm  | NA    | Perm  |      |
| Protected Phases     | 2     |       | 1     | 6     |       | 3     |       | 4    |
| Permitted Phases     |       | 2     | 6     |       | 3     |       | 3     |      |
| Detector Phase       | 2     | 2     | 1     | 6     | 3     | 3     | 3     |      |
| Switch Phase         |       |       |       |       |       |       |       |      |
| Minimum Initial (s)  | 10.0  | 10.0  | 5.0   | 10.0  | 7.0   | 7.0   | 7.0   | 5.0  |
| Minimum Split (s)    | 46.5  | 46.5  | 10.0  | 16.5  | 31.0  | 31.0  | 31.0  | 11.0 |
| Total Split (s)      | 85.0  | 85.0  | 10.0  | 95.0  | 34.0  | 34.0  | 34.0  | 11.0 |
| Total Split (%)      | 60.7% | 60.7% | 7.1%  | 67.9% | 24.3% | 24.3% | 24.3% | 8%   |
| Yellow Time (s)      | 4.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| All-Red Time (s)     | 2.5   | 2.5   | 2.0   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0  |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Total Lost Time (s)  | 6.5   | 6.5   | 5.0   | 6.5   | 6.0   | 6.0   | 6.0   | 6.0  |
| Lead/Lag             | Lag   | Lag   | Lead  |       | Lead  | Lead  | Lead  | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |      |
| Recall Mode          | C-Max | C-Max | Max   | C-Max | None  | None  | None  | None |
| Act Effct Green (s)  | 78.5  | 78.5  |       | 99.5  |       | 28.0  |       | 28.0 |
| Actuated g/C Ratio   | 0.56  | 0.56  |       | 0.71  |       | 0.20  |       | 0.20 |
| v/c Ratio            | 0.77  | 0.15  |       | 0.88  |       | 0.17  |       | 0.16 |
| Control Delay        | 25.8  | 3.5   |       | 21.2  |       | 47.9  |       | 11.9 |
| Queue Delay          | 2.1   | 0.6   |       | 0.0   |       | 0.0   |       | 0.0  |
| Total Delay          | 27.9  | 4.1   |       | 21.2  |       | 47.9  |       | 11.9 |
| LOS                  | C     | A     |       | C     |       | D     |       | B    |
| Approach Delay       | 25.9  |       |       | 21.2  |       | 29.9  |       |      |
| Approach LOS         | C     |       |       | C     |       | C     |       |      |

**Intersection Summary**  
Cycle Length: 140  
Actuated Cycle Length: 140  
Offset: 133 (95%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  
Natural Cycle: 130  
Control Type: Actuated-Coordinated  
Maximum v/c Ratio: 0.88  
Intersection Signal Delay: 24.1 Intersection LOS: C  
Intersection Capacity Utilization 95.0% ICU Level of Service F  
Analysis Period (min) 15



Phasings

2020 Market with Traffic Mitigation

1: N Pickett St/N Pickett St/Fire Station & Seminary Rd

PM PEAK

|                         | →     | ↘     | ↙    | ←     | ↖     | ↗     | ↘     | ↙    |
|-------------------------|-------|-------|------|-------|-------|-------|-------|------|
| Lane Group              | EBT   | EBR   | WBL  | WBT   | NBL   | NBT   | NBR   | ø4   |
| Protected Phases        | 2     |       | 1    | 6     |       | 3     |       | 4    |
| Permitted Phases        |       | 2     | 6    |       | 3     |       | 3     |      |
| Minimum Initial (s)     | 10.0  | 10.0  | 5.0  | 10.0  | 7.0   | 7.0   | 7.0   | 5.0  |
| Minimum Split (s)       | 46.5  | 46.5  | 10.0 | 16.5  | 31.0  | 31.0  | 31.0  | 11.0 |
| Total Split (s)         | 85.0  | 85.0  | 10.0 | 95.0  | 34.0  | 34.0  | 34.0  | 11.0 |
| Total Split (%)         | 60.7% | 60.7% | 7.1% | 67.9% | 24.3% | 24.3% | 24.3% | 8%   |
| Maximum Green (s)       | 78.5  | 78.5  | 5.0  | 88.5  | 28.0  | 28.0  | 28.0  | 5.0  |
| Yellow Time (s)         | 4.0   | 4.0   | 3.0  | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| All-Red Time (s)        | 2.5   | 2.5   | 2.0  | 2.5   | 3.0   | 3.0   | 3.0   | 3.0  |
| Lead/Lag                | Lag   | Lag   | Lead |       | Lead  | Lead  | Lead  | Lag  |
| Lead-Lag Optimize?      |       |       |      |       |       |       |       |      |
| Vehicle Extension (s)   | 4.0   | 4.0   | 4.0  | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| Minimum Gap (s)         | 4.0   | 4.0   | 4.0  | 4.0   | 3.0   | 3.0   | 3.0   | 3.0  |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  |
| Recall Mode             | C-Max | C-Max | Max  | C-Max | None  | None  | None  | None |
| Walk Time (s)           | 22.0  | 22.0  |      |       | 7.0   | 7.0   | 7.0   |      |
| Flash Dont Walk (s)     | 18.0  | 18.0  |      |       | 18.0  | 18.0  | 18.0  |      |
| Pedestrian Calls (#/hr) | 0     | 0     |      |       | 0     | 0     | 0     |      |
| 90th %ile Green (s)     | 78.5  | 78.5  | 16.0 | 99.5  | 28.0  | 28.0  | 28.0  | 0.0  |
| 90th %ile Term Code     | Coord | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |
| 70th %ile Green (s)     | 78.5  | 78.5  | 16.0 | 99.5  | 28.0  | 28.0  | 28.0  | 0.0  |
| 70th %ile Term Code     | Coord | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |
| 50th %ile Green (s)     | 78.5  | 78.5  | 16.0 | 99.5  | 28.0  | 28.0  | 28.0  | 0.0  |
| 50th %ile Term Code     | Coord | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |
| 30th %ile Green (s)     | 78.5  | 78.5  | 16.0 | 99.5  | 28.0  | 28.0  | 28.0  | 0.0  |
| 30th %ile Term Code     | Coord | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |
| 10th %ile Green (s)     | 78.5  | 78.5  | 16.0 | 99.5  | 28.0  | 28.0  | 28.0  | 0.0  |
| 10th %ile Term Code     | Coord | Coord | MaxR | Coord | Max   | Max   | Max   | Skip |

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 133 (95%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

2020 Market with Traffic Mitigation

2: I-395 NB Off-Ramp & Seminary Rd (S)

PM PEAK

|                     | ↘     | →     | ↘    | ↙    | ←    | ↖    | ↗    | ↘    | ↙     | ↘    | ↙    | ↘    | ↙    |
|---------------------|-------|-------|------|------|------|------|------|------|-------|------|------|------|------|
| Lane Group          | EBL   | EBT   | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR   | SBL  | SBT  | SBR  |      |
| Lane Configurations | ↘ ↗   | ↗ ↘   |      |      |      |      |      | ↗ ↘  | ↗ ↘   |      |      |      |      |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12    | 12   | 12   | 12   | 12   |
| Grade (%)           |       | 0%    |      |      | 0%   |      |      | 0%   |       |      | 0%   |      |      |
| Storage Length (ft) | 0     |       | 0    | 0    |      | 0    | 0    |      | 600   | 0    |      | 0    | 0    |
| Storage Lanes       | 1     |       | 0    | 0    |      | 0    | 0    |      | 1     | 0    |      | 0    | 0    |
| Taper Length (ft)   | 50    |       |      | 50   |      |      | 50   |      |       | 50   |      |      |      |
| Lane Util. Factor   | 0.91  | 0.91  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor     |       |       |      |      |      |      |      |      | 0.850 |      |      |      |      |
| Flt Protected       | 0.950 | 0.993 |      |      |      |      |      |      |       |      |      |      |      |
| Satd. Flow (prot)   | 1610  | 3366  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583  | 0    | 0    | 0    | 0    |
| Flt Permitted       | 0.950 | 0.993 |      |      |      |      |      |      |       |      |      |      |      |
| Satd. Flow (perm)   | 1610  | 3366  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583  | 0    | 0    | 0    | 0    |
| Right Turn on Red   | Yes   |       | Yes  |      |      | Yes  |      |      | Yes   |      |      |      | Yes  |
| Satd. Flow (RTOR)   | 47    | 45    |      |      |      |      |      |      | 321   |      |      |      |      |
| Link Speed (mph)    |       | 35    |      |      | 35   |      |      |      | 35    |      |      | 35   |      |
| Link Distance (ft)  |       | 307   |      |      | 322  |      |      |      | 1292  |      |      | 272  |      |
| Travel Time (s)     |       | 6.0   |      |      | 6.3  |      |      |      | 25.2  |      |      | 5.3  |      |

Intersection Summary

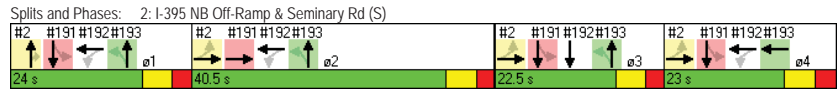
Area Type: Other

Timings  
2: I-395 NB Off-Ramp & Seminary Rd (S)

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | NBT   | NBR   | ø2   | ø3   | ø4   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |      |      |      |
| Volume (vph)         | 475   | 655   | 395   | 425   |      |      |      |
| Turn Type            | Perm  | NA    | NA    | Perm  |      |      |      |
| Protected Phases     | 2 3 4 | 2 3 4 | 1     |       | 2    | 3    | 4    |
| Permitted Phases     |       |       |       | 1     |      |      |      |
| Detector Phase       | 2 3 4 | 2 3 4 | 1     | 1     |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  |       |       | 10.0  | 10.0  | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    |       |       | 22.5  | 22.5  | 22.5 | 22.5 | 23.0 |
| Total Split (s)      | 86.0  | 86.0  | 24.0  | 24.0  | 40.5 | 22.5 | 23.0 |
| Total Split (%)      | 78.2% | 78.2% | 21.8% | 21.8% | 37%  | 20%  | 21%  |
| Yellow Time (s)      |       |       | 4.0   | 4.0   | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     |       |       | 2.5   | 2.5   | 2.5  | 2.5  | 3.0  |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | -2.5  |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             |       |       | Lead  | Lead  | Lag  | Lead | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          |       |       | Min   | Min   | Min  | Min  | Min  |
| Act Effct Green (s)  | 82.0  | 82.0  | 20.0  | 20.0  |      |      |      |
| Actuated g/C Ratio   | 0.75  | 0.75  | 0.18  | 0.18  |      |      |      |
| v/c Ratio            | 0.32  | 0.33  | 0.66  | 0.83  |      |      |      |
| Control Delay        | 0.8   | 5.5   | 47.5  | 27.3  |      |      |      |
| Queue Delay          | 1.8   | 0.4   | 0.0   | 0.0   |      |      |      |
| Total Delay          | 2.6   | 5.9   | 47.5  | 27.3  |      |      |      |
| LOS                  | A     | A     | D     | C     |      |      |      |
| Approach Delay       |       | 4.8   | 37.0  |       |      |      |      |
| Approach LOS         |       | A     | D     |       |      |      |      |

| Intersection Summary               |                        |
|------------------------------------|------------------------|
| Cycle Length:                      | 110                    |
| Actuated Cycle Length:             | 110                    |
| Natural Cycle:                     | 95                     |
| Control Type:                      | Actuated-Uncoordinated |
| Maximum v/c Ratio:                 | 0.91                   |
| Intersection Signal Delay:         | 18.4                   |
| Intersection LOS:                  | B                      |
| Intersection Capacity Utilization: | 57.7%                  |
| ICU Level of Service:              | B                      |
| Analysis Period (min):             | 15                     |



Phasings  
2: I-395 NB Off-Ramp & Seminary Rd (S)

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBL   | EBT   | NBT   | NBR   | ø2   | ø3   | ø4   |
|-------------------------|-------|-------|-------|-------|------|------|------|
| Protected Phases        |       | 2 3 4 | 1     |       | 2    | 3    | 4    |
| Permitted Phases        | 2 3 4 |       |       | 1     |      |      |      |
| Minimum Initial (s)     |       |       | 10.0  | 10.0  | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       |       |       | 22.5  | 22.5  | 22.5 | 22.5 | 23.0 |
| Total Split (s)         | 86.0  | 86.0  | 24.0  | 24.0  | 40.5 | 22.5 | 23.0 |
| Total Split (%)         | 78.2% | 78.2% | 21.8% | 21.8% | 37%  | 20%  | 21%  |
| Maximum Green (s)       |       |       | 17.5  | 17.5  | 34.0 | 16.0 | 16.0 |
| Yellow Time (s)         |       |       | 4.0   | 4.0   | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        |       |       | 2.5   | 2.5   | 2.5  | 2.5  | 3.0  |
| Lead/Lag                |       |       | Lead  | Lead  | Lag  | Lead | Lag  |
| Lead-Lag Optimize?      |       |       |       |       |      |      |      |
| Vehicle Extension (s)   |       |       | 5.0   | 5.0   | 3.0  | 3.0  | 3.0  |
| Minimum Gap (s)         |       |       | 5.0   | 5.0   | 3.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  |       |       | 0.0   | 0.0   | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      |       |       | 0.0   | 0.0   | 0.0  | 0.0  | 0.0  |
| Recall Mode             |       |       | Min   | Min   | Min  | Min  | Min  |
| Walk Time (s)           |       |       |       |       |      |      |      |
| Flash Dont Walk (s)     |       |       |       |       |      |      |      |
| Pedestrian Calls (#/hr) |       |       |       |       |      |      |      |
| 90th %ile Green (s)     |       |       | 17.5  | 17.5  | 34.0 | 16.0 | 16.0 |
| 90th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 70th %ile Green (s)     |       |       | 17.5  | 17.5  | 34.0 | 16.0 | 16.0 |
| 70th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 50th %ile Green (s)     |       |       | 17.5  | 17.5  | 34.0 | 16.0 | 16.0 |
| 50th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 30th %ile Green (s)     |       |       | 17.5  | 17.5  | 34.0 | 16.0 | 16.0 |
| 30th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |
| 10th %ile Green (s)     |       |       | 17.5  | 17.5  | 34.0 | 16.0 | 16.0 |
| 10th %ile Term Code     |       |       | Max   | Max   | Max  | Max  | Max  |

| Intersection Summary      |                        |
|---------------------------|------------------------|
| Cycle Length:             | 110                    |
| Actuated Cycle Length:    | 110                    |
| Control Type:             | Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: | 110                    |
| 70th %ile Actuated Cycle: | 110                    |
| 50th %ile Actuated Cycle: | 110                    |
| 30th %ile Actuated Cycle: | 110                    |
| 10th %ile Actuated Cycle: | 110                    |

Lanes and Geometrics  
3: Seminary Rd (S)/Seminary Rd (N) & Seminary Rd

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL  | EBT  | EBR   | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR   |
|---------------------|------|------|-------|------|------|------|------|------|------|------|------|-------|
| Lane Configurations |      | ↑↑   | ↑↑    |      | ↑↑   |      |      |      |      |      |      | ↑↑    |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12   | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12    |
| Grade (%)           |      | 0%   |       |      | 0%   |      |      | 0%   |      |      | 0%   |       |
| Storage Length (ft) | 0    |      | 0     | 0    |      | 0    | 0    |      | 0    | 0    |      | 0     |
| Storage Lanes       | 0    |      | 2     | 0    |      | 0    | 0    |      | 0    | 0    |      | 2     |
| Taper Length (ft)   | 50   |      |       | 50   |      |      | 50   |      |      | 50   |      |       |
| Lane Util. Factor   | 1.00 | 0.95 | 0.88  | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88  |
| Ped Bike Factor     |      |      |       |      |      |      |      |      |      |      |      |       |
| Frt                 |      |      | 0.850 |      |      |      |      |      |      |      |      | 0.850 |
| Flt Protected       |      |      |       |      |      |      |      |      |      |      |      |       |
| Satd. Flow (prot)   | 0    | 3539 | 2787  | 0    | 3539 | 0    | 0    | 0    | 0    | 0    | 0    | 2787  |
| Flt Permitted       |      |      |       |      |      |      |      |      |      |      |      |       |
| Satd. Flow (perm)   | 0    | 3539 | 2787  | 0    | 3539 | 0    | 0    | 0    | 0    | 0    | 0    | 2787  |
| Link Speed (mph)    |      | 35   |       |      | 35   |      |      | 35   |      |      |      | 35    |
| Link Distance (ft)  |      | 387  |       |      | 824  |      |      | 331  |      |      |      | 287   |
| Travel Time (s)     |      | 7.5  |       |      | 16.1 |      |      | 6.4  |      |      |      | 5.6   |

**Intersection Summary**  
Area Type: Other

Lanes and Geometrics  
7: Beauregard St/S Walter Reed Dr & King St

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT  | SBR   |
|---------------------|-------|------|-------|-------|-------|------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↑↑    | ↑↑   | ↑     | ↑↑    | ↑↑    | ↑↑   |       |       |      |       |      | ↑↑    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12   | 12    |
| Grade (%)           |       | 0%   |       |       | 0%    |      |       |       |      |       | 0%   |       |
| Storage Length (ft) | 230   |      | 100   | 225   |       | 0    | 400   |       | 0    | 160   |      | 140   |
| Storage Lanes       | 2     |      | 1     | 2     |       | 0    | 2     |       | 0    | 1     |      | 1     |
| Taper Length (ft)   | 140   |      |       | 140   |       |      | 50    |       |      | 50    |      |       |
| Lane Util. Factor   | 0.97  | 0.95 | 1.00  | 0.97  | 0.95  | 0.95 | 0.97  | 0.95  | 0.95 | 1.00  | 0.95 | 1.00  |
| Ped Bike Factor     |       |      | 0.98  |       | 1.00  |      |       | 1.00  |      |       |      | 0.98  |
| Frt                 |       |      | 0.850 |       | 0.987 |      |       | 0.980 |      |       |      | 0.850 |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (prot)   | 3433  | 3539 | 1583  | 3433  | 3488  | 0    | 3433  | 3458  | 0    | 1770  | 3539 | 1583  |
| Flt Permitted       | 0.950 |      |       | 0.950 |       |      | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (perm)   | 3433  | 3539 | 1547  | 3433  | 3488  | 0    | 3433  | 3458  | 0    | 1770  | 3539 | 1558  |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |       |       | Yes  |       |      | Yes   |
| Satd. Flow (RTOR)   |       |      | 98    |       | 11    |      |       | 17    |      |       |      | 118   |
| Link Speed (mph)    |       | 35   |       |       | 35    |      |       | 35    |      |       |      | 35    |
| Link Distance (ft)  |       | 1357 |       |       | 1477  |      |       | 1439  |      |       |      | 1148  |
| Travel Time (s)     |       | 26.4 |       |       | 28.8  |      |       | 28.0  |      |       |      | 22.4  |

**Intersection Summary**  
Area Type: Other



Timings

2020 Market with Traffic Mitigation

7: Beauregard St/S Walter Reed Dr & King St

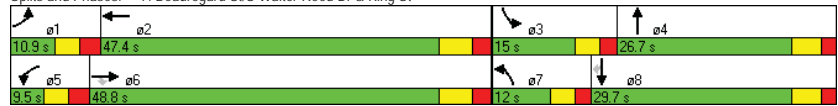
PM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL  | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↘     | ↔    | ↕     | ↔     | ↕     | ↔     | ↕     | ↘     |
| Volume (vph)         | 105   | 1360  | 225   | 90   | 990   | 235   | 645   | 170   | 700   | 140   |
| Turn Type            | Prot  | NA    | Perm  | Prot | NA    | Prot  | NA    | Prot  | NA    | Perm  |
| Protected Phases     | 1     | 6     |       | 5    | 2     | 7     | 4     | 3     | 8     |       |
| Permitted Phases     |       |       | 6     |      |       |       |       |       |       | 8     |
| Detector Phase       | 1     | 6     | 6     | 5    | 2     | 7     | 4     | 3     | 8     | 8     |
| Switch Phase         |       |       |       |      |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 10.0  | 10.0  | 4.0  | 10.0  | 6.5   | 7.0   | 3.5   | 7.0   | 7.0   |
| Minimum Split (s)    | 9.5   | 27.5  | 27.5  | 9.5  | 27.5  | 12.0  | 26.5  | 9.0   | 26.5  | 26.5  |
| Total Split (s)      | 10.9  | 48.8  | 48.8  | 9.5  | 47.4  | 12.0  | 26.7  | 15.0  | 29.7  | 29.7  |
| Total Split (%)      | 10.9% | 48.8% | 48.8% | 9.5% | 47.4% | 12.0% | 26.7% | 15.0% | 29.7% | 29.7% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0  | 4.0   | 3.0   | 3.5   | 3.0   | 3.5   | 3.5   |
| All-Red Time (s)     | 2.5   | 2.5   | 2.5   | 2.5  | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | -5.0  | -5.0  | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.5   | 6.5   | 6.5   | 5.5  | 6.5   | 0.0   | 0.5   | 5.0   | 5.5   | 5.5   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |      |       |       |       |       |       |       |
| Recall Mode          | None  | Min   | Min   | None | Min   | None  | C-Min | None  | C-Min | C-Min |
| Act Effct Green (s)  | 5.4   | 42.3  | 42.3  | 4.0  | 40.9  | 12.0  | 26.2  | 10.0  | 24.2  | 24.2  |
| Actuated g/C Ratio   | 0.05  | 0.42  | 0.42  | 0.04 | 0.41  | 0.12  | 0.26  | 0.10  | 0.24  | 0.24  |
| v/c Ratio            | 0.61  | 0.98  | 0.34  | 0.71 | 0.81  | 0.61  | 0.87  | 1.03  | 0.88  | 0.32  |
| Control Delay        | 61.0  | 47.5  | 12.7  | 75.0 | 31.4  | 43.6  | 38.1  | 122.6 | 49.7  | 11.3  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 61.0  | 47.5  | 12.7  | 75.0 | 31.4  | 43.6  | 38.1  | 122.6 | 49.7  | 11.3  |
| LOS                  | E     | D     | B     | E    | C     | D     | D     | F     | D     | B     |
| Approach Delay       |       | 43.7  |       |      | 34.8  |       | 39.4  |       | 56.6  |       |
| Approach LOS         |       | D     |       |      | C     |       | D     |       | E     |       |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 92 (92%), Referenced to phase 4:NBT and 8:SBT, Start of Yellow  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.03  
 Intersection Signal Delay: 43.4  
 Intersection LOS: D  
 Intersection Capacity Utilization 88.4%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 7: Beauregard St/S Walter Reed Dr & King St



Phasings

2020 Market with Traffic Mitigation

7: Beauregard St/S Walter Reed Dr & King St

PM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBL  | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 1     | 6     |       |      |       | 5     | 2     | 7     | 4     | 3     |
| Permitted Phases        |       |       | 6     |      |       |       |       |       |       | 8     |
| Minimum Initial (s)     | 4.0   | 10.0  | 10.0  | 4.0  | 10.0  | 6.5   | 7.0   | 3.5   | 7.0   | 7.0   |
| Minimum Split (s)       | 9.5   | 27.5  | 27.5  | 9.5  | 27.5  | 12.0  | 26.5  | 9.0   | 26.5  | 26.5  |
| Total Split (s)         | 10.9  | 48.8  | 48.8  | 9.5  | 47.4  | 12.0  | 26.7  | 15.0  | 29.7  | 29.7  |
| Total Split (%)         | 10.9% | 48.8% | 48.8% | 9.5% | 47.4% | 12.0% | 26.7% | 15.0% | 29.7% | 29.7% |
| Maximum Green (s)       | 5.4   | 42.3  | 42.3  | 4.0  | 40.9  | 7.0   | 21.2  | 10.0  | 24.2  | 24.2  |
| Yellow Time (s)         | 3.0   | 4.0   | 4.0   | 3.0  | 4.0   | 3.0   | 3.5   | 3.0   | 3.5   | 3.5   |
| All-Red Time (s)        | 2.5   | 2.5   | 2.5   | 2.5  | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead  | Lag   | Lag   | Lead | Lag   | Lead  | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?      |       |       |       |      |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | Min   | Min   | None | Min   | None  | C-Min | None  | C-Min | C-Min |
| Walk Time (s)           | 7.0   | 7.0   |       | 7.0  |       | 7.0   |       | 7.0   |       | 7.0   |
| Flash Dont Walk (s)     | 14.0  | 14.0  |       | 14.0 |       | 14.0  |       | 14.0  |       | 14.0  |
| Pedestrian Calls (#/hr) | 0     | 0     |       | 0    |       | 0     |       | 0     |       | 0     |
| 90th %ile Green (s)     | 5.4   | 42.3  | 42.3  | 4.0  | 40.9  | 7.0   | 21.2  | 10.0  | 24.2  | 24.2  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max  | Max   | Max   | Coord | Max   | Coord | Coord |
| 70th %ile Green (s)     | 5.4   | 42.3  | 42.3  | 4.0  | 40.9  | 7.0   | 21.2  | 10.0  | 24.2  | 24.2  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max  | Max   | Max   | Coord | Max   | Coord | Coord |
| 50th %ile Green (s)     | 5.4   | 42.3  | 42.3  | 4.0  | 40.9  | 7.0   | 21.2  | 10.0  | 24.2  | 24.2  |
| 50th %ile Term Code     | Max   | Max   | Max   | Max  | Max   | Max   | Coord | Max   | Coord | Coord |
| 30th %ile Green (s)     | 5.4   | 42.3  | 42.3  | 4.0  | 40.9  | 7.0   | 21.2  | 10.0  | 24.2  | 24.2  |
| 30th %ile Term Code     | Max   | Max   | Max   | Max  | Hold  | Max   | Coord | Max   | Coord | Coord |
| 10th %ile Green (s)     | 5.4   | 42.3  | 42.3  | 4.0  | 40.9  | 7.0   | 21.2  | 10.0  | 24.2  | 24.2  |
| 10th %ile Term Code     | Max   | Max   | Max   | Max  | Hold  | Max   | Coord | Max   | Coord | Coord |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 92 (92%), Referenced to phase 4:NBT and 8:SBT, Start of Yellow  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
9: Beauregard St & Braddock Rd

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT  | WBR   | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|-------|------|-------|------|-------|-------|------|-------|-------|-------|------|
| Lane Configurations | ↔     | ↕     | ↔    | ↔     | ↕    | ↕     | ↔     | ↕    | ↕     | ↔     | ↕     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           |       | -6%   |      |       | -4%  |       |       | -2%  |       |       | 2%    |      |
| Storage Length (ft) | 100   |       | 0    | 200   |      | 60    | 80    |      | 100   | 200   |       | 0    |
| Storage Lanes       | 1     |       | 0    | 1     |      | 1     | 1     |      | 1     | 1     |       | 0    |
| Taper Length (ft)   | 50    |       |      | 50    |      |       | 50    |      |       | 50    |       |      |
| Lane Util. Factor   | 1.00  | 0.95  | 0.95 | 1.00  | 0.95 | 1.00  | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 0.95 |
| Ped Bike Factor     |       |       |      |       |      |       |       |      |       |       | 1.00  |      |
| Frt                 |       | 0.959 |      |       |      | 0.850 |       |      | 0.850 |       | 0.981 |      |
| Flt Protected       | 0.950 |       |      | 0.950 |      |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (prot)   | 1823  | 3496  | 0    | 1805  | 3610 | 1615  | 1787  | 3575 | 1599  | 1752  | 3421  | 0    |
| Flt Permitted       | 0.607 |       |      | 0.613 |      |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (perm)   | 1165  | 3496  | 0    | 1165  | 3610 | 1615  | 1787  | 3575 | 1599  | 1752  | 3421  | 0    |
| Right Turn on Red   |       |       | Yes  |       |      | Yes   |       |      | Yes   |       |       | Yes  |
| Satd. Flow (RTOR)   |       | 43    |      |       |      | 130   |       |      | 76    |       | 25    |      |
| Link Speed (mph)    |       | 35    |      |       |      | 35    |       |      | 35    |       | 35    |      |
| Link Distance (ft)  |       | 755   |      |       | 1840 |       |       |      | 1125  |       | 1439  |      |
| Travel Time (s)     |       | 14.7  |      |       | 35.8 |       |       |      | 21.9  |       | 28.0  |      |

Intersection Summary

Area Type: Other

Timings  
9: Beauregard St & Braddock Rd

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↕     | ↔     | ↕     | ↕     | ↔     | ↕     |
| Volume (vph)         | 50    | 105   | 120   | 125   | 235   | 65    | 695   | 110   | 315   | 610   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+ov | Prot  | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 7     | 4     | 3     | 8     | 1     | 5     | 2     |       | 1     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 8     |       |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 3     | 8     | 1     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 7.0   | 4.0   | 4.0   | 6.0   | 6.0   | 10.0  | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)    | 8.0   | 22.5  | 8.0   | 20.0  | 11.0  | 11.0  | 26.0  | 26.0  | 11.0  | 26.0  |
| Total Split (s)      | 8.0   | 22.5  | 8.0   | 22.5  | 35.0  | 13.0  | 34.5  | 34.5  | 35.0  | 56.5  |
| Total Split (%)      | 8.0%  | 22.5% | 8.0%  | 22.5% | 35.0% | 13.0% | 34.5% | 34.5% | 35.0% | 56.5% |
| Yellow Time (s)      | 3.5   | 4.0   | 3.5   | 3.5   | 3.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 0.5   | 2.5   | 0.5   | 0.5   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | -2.5  | 0.0   | -1.0  | -2.0  | 0.0   | -1.0  | -2.0  |
| Total Lost Time (s)  | 1.5   | 4.0   | 1.5   | 1.5   | 5.0   | 4.0   | 6.0   | 6.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       | C-Max | C-Max | None  | C-Max |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |
| Act Effct Green (s)  | 20.8  | 11.8  | 21.1  | 15.9  | 41.6  | 8.6   | 43.0  | 41.0  | 25.2  | 61.8  |
| Actuated g/C Ratio   | 0.21  | 0.12  | 0.21  | 0.16  | 0.42  | 0.09  | 0.43  | 0.41  | 0.25  | 0.62  |
| v/c Ratio            | 0.19  | 0.35  | 0.45  | 0.23  | 0.34  | 0.46  | 0.49  | 0.17  | 0.77  | 0.35  |
| Control Delay        | 31.5  | 30.5  | 33.8  | 34.4  | 4.5   | 53.7  | 18.1  | 5.3   | 29.0  | 5.5   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 31.5  | 30.5  | 33.8  | 34.4  | 4.5   | 53.7  | 18.1  | 5.3   | 29.0  | 5.5   |
| LOS                  | C     | C     | C     | C     | A     | D     | B     | A     | C     | A     |
| Approach Delay       |       | 30.7  |       | 19.6  |       |       | 19.1  |       |       | 12.8  |
| Approach LOS         |       | C     |       | B     |       |       | B     |       |       | B     |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 32 (32%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 17.6  
 Intersection LOS: B  
 Intersection Capacity Utilization 62.5%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 9: Beauregard St & Braddock Rd



Phasings  
9: Beauregard St & Braddock Rd

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBL  | EBT   | WBL  | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 7    | 4     | 3    | 8     | 1     | 5     | 2     |       | 1     | 6     |
| Permitted Phases        | 4    |       | 8    |       | 8     |       |       | 2     |       |       |
| Minimum Initial (s)     | 4.0  | 7.0   | 4.0  | 4.0   | 6.0   | 6.0   | 10.0  | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)       | 8.0  | 22.5  | 8.0  | 20.0  | 11.0  | 11.0  | 26.0  | 26.0  | 11.0  | 26.0  |
| Total Split (s)         | 8.0  | 22.5  | 8.0  | 22.5  | 35.0  | 13.0  | 34.5  | 34.5  | 35.0  | 56.5  |
| Total Split (%)         | 8.0% | 22.5% | 8.0% | 22.5% | 35.0% | 13.0% | 34.5% | 34.5% | 35.0% | 56.5% |
| Maximum Green (s)       | 4.0  | 16.0  | 4.0  | 18.5  | 30.0  | 8.0   | 28.5  | 28.5  | 30.0  | 50.5  |
| Yellow Time (s)         | 3.5  | 4.0   | 3.5  | 3.5   | 3.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 0.5  | 2.5   | 0.5  | 0.5   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead | Lag   | Lead | Lag   | Lead  | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |      |       |      |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0  | 2.0   | 3.0  | 3.0   | 3.0   | 3.0   | 0.2   | 0.2   | 3.0   | 0.2   |
| Minimum Gap (s)         | 3.0  | 2.0   | 3.0  | 3.0   | 3.0   | 3.0   | 0.2   | 0.2   | 3.0   | 0.2   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | None  | None | None  | None  | None  | C-Max | C-Max | None  | C-Max |
| Walk Time (s)           | 4.0  |       |      | 5.0   |       |       | 7.0   | 7.0   |       | 7.0   |
| Flash Dont Walk (s)     |      | 12.0  |      |       | 11.0  |       |       | 13.0  |       | 13.0  |
| Pedestrian Calls (#/hr) |      | 5     |      | 0     |       |       | 5     | 5     |       | 5     |
| 90th %ile Green (s)     | 4.0  | 16.0  | 4.0  | 18.5  | 30.0  | 8.0   | 28.5  | 28.5  | 30.0  | 50.5  |
| 90th %ile Term Code     | Max  | Ped   | Max  | Hold  | Max   | Max   | Coord | Coord | Max   | Coord |
| 70th %ile Green (s)     | 4.0  | 8.8   | 4.0  | 11.3  | 28.4  | 8.0   | 37.3  | 37.3  | 28.4  | 57.7  |
| 70th %ile Term Code     | Max  | Gap   | Max  | Hold  | Gap   | Max   | Coord | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 4.0  | 7.7   | 4.0  | 10.2  | 24.6  | 8.0   | 42.2  | 42.2  | 24.6  | 58.8  |
| 50th %ile Term Code     | Max  | Gap   | Max  | Hold  | Gap   | Max   | Coord | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 4.0  | 7.0   | 4.0  | 9.5   | 21.3  | 7.9   | 46.2  | 46.2  | 21.3  | 59.6  |
| 30th %ile Term Code     | Max  | Min   | Max  | Hold  | Gap   | Gap   | Coord | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 0.0  | 7.0   | 4.0  | 17.5  | 16.6  | 0.0   | 50.9  | 50.9  | 16.6  | 72.5  |
| 10th %ile Term Code     | Skip | Min   | Max  | Hold  | Gap   | Skip  | Coord | Coord | Gap   | Coord |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 32 (32%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
10: Beauregard St & Fillmore Ave

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT   | WBR  | NBL   | NBT  | NBR  | SBL   | SBT  | SBR  |
|---------------------|------|-------|-------|------|-------|------|-------|------|------|-------|------|------|
| Lane Configurations |      | ↕     | ↕     |      | ↕     |      | ↕     | ↕    |      | ↕     | ↕    | ↕    |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12    | 12   | 12    | 12   | 12   | 12    | 12   | 12   |
| Grade (%)           |      | -3%   |       |      | -3%   |      |       | -4%  |      |       | 3%   |      |
| Storage Length (ft) | 0    |       | 150   | 0    |       | 0    | 200   |      | 0    | 75    |      | 0    |
| Storage Lanes       | 0    |       | 1     | 0    |       | 0    | 1     |      | 0    | 1     |      | 0    |
| Taper Length (ft)   | 50   |       |       | 50   |       |      | 50    |      |      | 50    |      |      |
| 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     |      | 0.98  |       | 0.99 |       |      | 1.00  |      |      | 1.00  |      | 1.00 |
| Frt                 |      |       | 0.850 |      | 0.960 |      | 0.992 |      |      | 0.986 |      |      |
| Flt Protected       |      | 0.958 |       |      | 0.971 |      | 0.950 |      |      | 0.950 |      |      |
| Satd. Flow (prot)   | 0    | 1811  | 1607  | 0    | 1753  | 0    | 1805  | 3577 | 0    | 1743  | 3424 | 0    |
| Flt Permitted       |      | 0.679 |       |      | 0.770 |      | 0.950 |      |      | 0.950 |      |      |
| Satd. Flow (perm)   | 0    | 1284  | 1574  | 0    | 1390  | 0    | 1805  | 3577 | 0    | 1743  | 3424 | 0    |
| Right Turn on Red   |      |       | Yes   |      |       | Yes  |       |      | Yes  |       |      | Yes  |
| Satd. Flow (RTOR)   |      |       | 101   |      | 23    |      |       | 7    |      |       | 14   |      |
| Link Speed (mph)    |      | 25    |       |      | 25    |      |       | 35   |      |       | 35   |      |
| Link Distance (ft)  |      | 507   |       |      | 309   |      |       | 809  |      |       | 1125 |      |
| Travel Time (s)     |      | 13.8  |       |      | 8.4   |      |       | 15.8 |      |       | 21.9 |      |

Intersection Summary

Area Type: Other

Timings  
10: Beauregard St & Fillmore Ave

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       | ↕     | ↕     |       | ↕     | ↕     | ↕     | ↕     | ↕     |
| Volume (vph)         | 80    | 10    | 125   | 60    | 10    | 60    | 760   | 20    | 680   |
| Turn Type            | Perm  | NA    | pm+ov | Perm  | NA    | Prot  | NA    | Prot  | NA    |
| Protected Phases     |       | 4     | 5     |       | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       |       | 4     |       |       |       |       |       |
| Detector Phase       | 4     | 4     | 5     | 4     | 4     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 14.0  | 14.0  | 6.0   | 14.0  | 14.0  | 6.0   | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)    | 33.0  | 33.0  | 11.0  | 33.0  | 33.0  | 11.0  | 16.0  | 11.0  | 16.0  |
| Total Split (s)      | 37.0  | 37.0  | 16.0  | 37.0  | 37.0  | 16.0  | 50.0  | 13.0  | 47.0  |
| Total Split (%)      | 37.0% | 37.0% | 16.0% | 37.0% | 37.0% | 16.0% | 50.0% | 13.0% | 47.0% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.0  | -2.0  | -1.0  | -2.0  | -2.0  | -1.0  | -2.0  | -1.0  | -2.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             |       |       | Lead  |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |       |
| Act Effct Green (s)  | 18.6  | 27.8  |       | 18.6  | 9.2   | 68.5  | 7.5   | 60.2  |       |
| Actuated g/C Ratio   | 0.19  | 0.28  |       | 0.19  | 0.09  | 0.68  | 0.08  | 0.60  |       |
| v/c Ratio            | 0.41  | 0.26  |       | 0.39  | 0.39  | 0.35  | 0.17  | 0.39  |       |
| Control Delay        | 40.0  | 8.1   |       | 31.0  | 49.0  | 8.6   | 48.3  | 5.0   |       |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Total Delay          | 40.0  | 8.1   |       | 31.0  | 49.0  | 8.6   | 48.3  | 5.0   |       |
| LOS                  | D     | A     |       | C     | D     | A     | D     | A     |       |
| Approach Delay       | 21.5  |       |       | 31.0  |       | 11.5  |       | 6.2   |       |
| Approach LOS         | C     |       |       | C     |       | B     |       | A     |       |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 20 (20%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.41  
 Intersection Signal Delay: 11.5      Intersection LOS: B  
 Intersection Capacity Utilization 53.1%      ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 10: Beauregard St & Fillmore Ave



Phasings  
10: Beauregard St & Fillmore Ave

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 4     | 5     |       | 4     | 5     | 2     | 1     | 6     |
| Permitted Phases        | 4     |       |       | 4     |       |       |       |       |       |
| Minimum Initial (s)     | 14.0  | 14.0  | 6.0   | 14.0  | 14.0  | 6.0   | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)       | 33.0  | 33.0  | 11.0  | 33.0  | 33.0  | 11.0  | 16.0  | 11.0  | 16.0  |
| Total Split (s)         | 37.0  | 37.0  | 16.0  | 37.0  | 37.0  | 16.0  | 50.0  | 13.0  | 47.0  |
| Total Split (%)         | 37.0% | 37.0% | 16.0% | 37.0% | 37.0% | 16.0% | 50.0% | 13.0% | 47.0% |
| Maximum Green (s)       | 31.0  | 31.0  | 11.0  | 31.0  | 31.0  | 11.0  | 44.0  | 8.0   | 41.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       | Lead  |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.2   | 2.0   | 0.2   |
| Minimum Gap (s)         | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 0.2   | 2.0   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Walk Time (s)           | 4.0   | 4.0   |       | 4.0   | 4.0   |       |       |       |       |
| Flash Dont Walk (s)     | 23.0  | 23.0  |       | 23.0  | 23.0  |       |       |       |       |
| Pedestrian Calls (#/hr) | 5     | 5     |       | 5     | 5     |       |       |       |       |
| 90th %ile Green (s)     | 27.0  | 27.0  | 11.0  | 27.0  | 27.0  | 11.0  | 48.2  | 7.8   | 45.0  |
| 90th %ile Term Code     | Ped   | Ped   | Max   | Ped   | Ped   | Max   | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 14.0  | 14.0  | 9.4   | 14.0  | 14.0  | 9.4   | 62.4  | 6.6   | 59.6  |
| 70th %ile Term Code     | Min   | Min   | Gap   | Min   | Min   | Gap   | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 14.0  | 14.0  | 8.1   | 14.0  | 14.0  | 8.1   | 74.0  | 0.0   | 60.9  |
| 50th %ile Term Code     | Min   | Min   | Gap   | Min   | Min   | Gap   | Coord | Skip  | Coord |
| 30th %ile Green (s)     | 14.0  | 14.0  | 6.7   | 14.0  | 14.0  | 6.7   | 74.0  | 0.0   | 62.3  |
| 30th %ile Term Code     | Min   | Min   | Gap   | Min   | Min   | Gap   | Coord | Skip  | Coord |
| 10th %ile Green (s)     | 14.0  | 14.0  | 6.0   | 14.0  | 14.0  | 6.0   | 74.0  | 0.0   | 63.0  |
| 10th %ile Term Code     | Min   | Min   | Min   | Min   | Min   | Min   | Coord | Skip  | Coord |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 20 (20%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics 2020 Market with Traffic Mitigation  
 11: Mark Center Dr/Mark Center Dr/ Southern Towers & Seminary Rd PM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT  | WBR   | NBL   | NBT  | NBR   | SBL   | SBT  | SBR   |
|---------------------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|
| Lane Configurations | ↔     | ↔↔↔  | ↔     | ↔     | ↔↔↔  | ↔     | ↔     | ↔    | ↔↔↔   | ↔     | ↔    | ↔     |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12   | 12    |
| Grade (%)           |       | 0%   |       |       | -1%  |       |       | 0%   |       |       | 0%   |       |
| Storage Length (ft) | 225   |      | 400   | 0     |      | 200   | 250   |      | 250   | 150   |      | 150   |
| Storage Lanes       | 1     |      | 1     | 1     |      | 1     | 1     |      | 2     | 1     |      | 1     |
| Taper Length (ft)   | 50    |      |       | 50    |      |       | 50    |      |       | 50    |      |       |
| Lane Util. Factor   | 1.00  | 0.91 | 1.00  | 1.00  | 0.91 | 1.00  | 1.00  | 1.00 | 0.76  | 0.97  | 1.00 | 1.00  |
| Ped Bike Factor     |       |      |       |       |      |       |       |      |       |       |      | 0.99  |
| Frt                 |       |      | 0.850 |       |      | 0.850 |       |      | 0.850 |       |      | 0.850 |
| Flt Protected       | 0.950 |      |       | 0.950 |      |       | 0.950 |      |       | 0.950 |      |       |
| Satd. Flow (prot)   | 1770  | 5085 | 1583  | 1778  | 5111 | 1591  | 1770  | 1863 | 3610  | 3433  | 1863 | 1583  |
| Flt Permitted       | 0.950 |      |       | 0.950 |      |       | 0.950 |      |       | 0.950 |      |       |
| Satd. Flow (perm)   | 1770  | 5085 | 1583  | 1778  | 5111 | 1591  | 1770  | 1863 | 3610  | 3433  | 1863 | 1562  |
| Right Turn on Red   |       |      | Yes   |       |      | Yes   |       |      | No    |       |      | Yes   |
| Satd. Flow (RTOR)   |       |      | 59    |       |      | 76    |       |      |       |       |      | 75    |
| Link Speed (mph)    |       | 35   |       |       | 35   |       |       | 25   |       |       |      | 25    |
| Link Distance (ft)  |       | 692  |       |       | 387  |       |       | 791  |       |       |      | 642   |
| Travel Time (s)     |       | 13.5 |       |       | 7.5  |       |       | 21.6 |       |       |      | 17.5  |

**Intersection Summary**

Area Type: Other

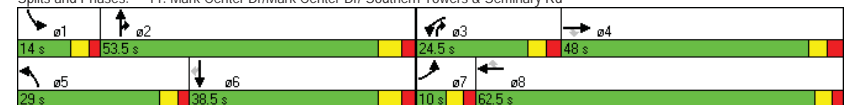
Timings 2020 Market with Traffic Mitigation  
 11: Mark Center Dr/Mark Center Dr/ Southern Towers & Seminary Rd PM PEAK

| Lane Group           | EBL  | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔    | ↔↔↔   | ↔     | ↔     | ↔↔↔   | ↔     | ↔     | ↔     | ↔↔↔   | ↔     | ↔     | ↔     |
| Volume (vph)         | 35   | 1465  | 55    | 155   | 1555  | 110   | 305   | 75    | 1345  | 195   | 15    | 70    |
| Turn Type            | Prot | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    | pt+ov | Prot  | NA    | Perm  |
| Protected Phases     | 7    | 4     |       | 3     | 8     |       | 5     | 2     | 2 3   | 1     | 6     |       |
| Permitted Phases     |      |       | 4     |       |       | 8     |       |       |       |       |       | 6     |
| Detector Phase       | 7    | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 2 3   | 1     | 6     | 6     |
| Switch Phase         |      |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0  | 7.0   | 7.0   | 10.0  | 4.0   | 4.0   | 4.0   | 10.0  |       | 4.0   | 10.0  | 10.0  |
| Minimum Split (s)    | 9.0  | 13.0  | 13.0  | 24.5  | 29.0  | 29.0  | 9.0   | 25.5  |       | 9.0   | 38.5  | 38.5  |
| Total Split (s)      | 10.0 | 48.0  | 48.0  | 24.5  | 62.5  | 62.5  | 29.0  | 53.5  | 78.0  | 14.0  | 38.5  | 38.5  |
| Total Split (%)      | 7.1% | 34.3% | 34.3% | 17.5% | 44.6% | 44.6% | 20.7% | 38.2% | 55.7% | 10.0% | 27.5% | 27.5% |
| Yellow Time (s)      | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   |       | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 2.0  | 3.0   | 3.0   | 2.5   | 2.0   | 2.0   | 2.0   | 2.5   |       | 2.0   | 2.5   | 2.5   |
| Lost Time Adjust (s) | -1.5 | -2.5  | 0.0   | -1.5  | -2.5  | 0.0   | -2.0  | -2.0  | -1.5  | -1.5  | -1.5  | -1.5  |
| Total Lost Time (s)  | 3.5  | 3.5   | 6.0   | 4.0   | 2.5   | 5.0   | 3.0   | 4.5   | 5.0   | 3.5   | 5.0   | 5.0   |
| Lead/Lag             | Lead | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |       | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   |      |       |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None | C-Max | C-Max | None  | C-Max | C-Max | None  | None  |       | None  | Max   | Max   |
| Act Effct Green (s)  | 6.5  | 46.2  | 43.7  | 18.8  | 62.0  | 59.5  | 26.0  | 49.0  | 71.3  | 10.5  | 33.5  | 33.5  |
| Actuated g/C Ratio   | 0.05 | 0.33  | 0.31  | 0.13  | 0.44  | 0.42  | 0.19  | 0.35  | 0.51  | 0.08  | 0.24  | 0.24  |
| v/c Ratio            | 0.46 | 0.94  | 0.11  | 0.70  | 0.74  | 0.16  | 1.00  | 0.12  | 0.79  | 0.82  | 0.04  | 0.17  |
| Control Delay        | 74.5 | 58.8  | 16.8  | 71.6  | 36.2  | 12.6  | 105.3 | 31.7  | 31.7  | 87.9  | 41.3  | 9.7   |
| Queue Delay          | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 74.5 | 58.8  | 16.8  | 71.6  | 36.2  | 12.6  | 105.3 | 31.7  | 31.7  | 87.9  | 41.3  | 9.7   |
| LOS                  | E    | E     | B     | E     | D     | B     | F     | C     | C     | F     | D     | A     |
| Approach Delay       |      | 57.7  |       |       | 37.8  |       |       | 44.7  |       |       | 65.9  |       |
| Approach LOS         |      | E     |       |       | D     |       |       | D     |       |       | E     |       |

**Intersection Summary**

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 114 (81%), Referenced to phase 4:EBT and 8:WBT, Start of Green  
 Natural Cycle: 130  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.00  
 Intersection Signal Delay: 47.2 Intersection LOS: D  
 Intersection Capacity Utilization 84.4% ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 11: Mark Center Dr/Mark Center Dr/ Southern Towers & Seminary Rd



Phasings 2020 Market with Traffic Mitigation  
 11: Mark Center Dr/Mark Center Dr/ Southern Towers & Seminary Rd PM PEAK

| Lane Group              | EBL  | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 7    | 4     |       | 3     | 8     |       | 5     | 2     | 23    | 1     | 6     |       |
| Permitted Phases        |      |       | 4     |       |       | 8     |       |       |       |       |       | 6     |
| Minimum Initial (s)     | 4.0  | 7.0   | 7.0   | 10.0  | 4.0   | 4.0   | 4.0   | 10.0  |       | 4.0   | 10.0  | 10.0  |
| Minimum Split (s)       | 9.0  | 13.0  | 13.0  | 24.5  | 29.0  | 29.0  | 9.0   | 25.5  |       | 9.0   | 38.5  | 38.5  |
| Total Split (s)         | 10.0 | 48.0  | 48.0  | 24.5  | 62.5  | 62.5  | 29.0  | 53.5  | 78.0  | 14.0  | 38.5  | 38.5  |
| Total Split (%)         | 7.1% | 34.3% | 34.3% | 17.5% | 44.6% | 44.6% | 20.7% | 38.2% | 55.7% | 10.0% | 27.5% | 27.5% |
| Maximum Green (s)       | 5.0  | 42.0  | 42.0  | 19.0  | 57.5  | 57.5  | 24.0  | 47.0  |       | 9.0   | 32.0  | 32.0  |
| Yellow Time (s)         | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   |       | 3.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 2.0  | 3.0   | 3.0   | 2.5   | 2.0   | 2.0   | 2.0   | 2.5   |       | 2.0   | 2.5   | 2.5   |
| Lead/Lag                | Lead | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |       | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?      |      |       |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0  | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   | 3.0   | 0.2   |       | 3.0   | 0.2   | 0.2   |
| Minimum Gap (s)         | 3.0  | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   | 3.0   | 0.2   |       | 3.0   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | C-Max | C-Max | None  | C-Max | C-Max | None  | None  |       | None  | Max   | Max   |
| Walk Time (s)           |      |       |       |       | 7.0   | 7.0   |       |       |       |       | 7.0   | 7.0   |
| Flash Dont Walk (s)     |      |       |       |       | 17.0  | 17.0  |       |       |       |       | 25.0  | 25.0  |
| Pedestrian Calls (#/hr) |      |       |       |       | 0     | 0     |       |       |       |       | 0     | 0     |
| 90th %ile Green (s)     | 5.0  | 42.0  | 42.0  | 19.0  | 57.5  | 57.5  | 24.0  | 47.0  |       | 9.0   | 32.0  | 32.0  |
| 90th %ile Term Code     | Max  | Coord | Coord | Max   | Coord | Coord | Max   | Max   |       | Max   | MaxR  | MaxR  |
| 70th %ile Green (s)     | 5.0  | 42.0  | 42.0  | 19.0  | 57.5  | 57.5  | 24.0  | 47.0  |       | 9.0   | 32.0  | 32.0  |
| 70th %ile Term Code     | Max  | Coord | Coord | Max   | Coord | Coord | Max   | Max   |       | Max   | MaxR  | MaxR  |
| 50th %ile Green (s)     | 5.0  | 42.0  | 42.0  | 19.0  | 57.5  | 57.5  | 24.0  | 47.0  |       | 9.0   | 32.0  | 32.0  |
| 50th %ile Term Code     | Max  | Coord | Coord | Max   | Coord | Coord | Max   | Max   |       | Max   | MaxR  | MaxR  |
| 30th %ile Green (s)     | 5.0  | 44.3  | 44.3  | 16.7  | 57.5  | 57.5  | 24.0  | 47.0  |       | 9.0   | 32.0  | 32.0  |
| 30th %ile Term Code     | Max  | Coord | Coord | Gap   | Coord | Coord | Max   | Hold  |       | Max   | MaxR  | MaxR  |
| 10th %ile Green (s)     | 0.0  | 48.1  | 48.1  | 12.9  | 67.5  | 67.5  | 24.0  | 47.0  |       | 9.0   | 32.0  | 32.0  |
| 10th %ile Term Code     | Skip | Coord | Coord | Gap   | Coord | Coord | Max   | Hold  |       | Max   | MaxR  | MaxR  |

**Intersection Summary**

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 114 (81%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Control Type: Actuated-Coordinated

Lanes and Geometrics 2020 Market with Traffic Mitigation  
 13: Echols Ave & Seminary Rd PM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL  | NBT   | NBR  | SBL  | SBT   | SBR  |
|---------------------|-------|------|------|-------|-------|------|------|-------|------|------|-------|------|
| Lane Configurations |       |      |      |       |       |      |      |       |      |      |       |      |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12   |
| Grade (%)           |       | -1%  |      |       | 1%    |      |      | 0%    |      |      | 0%    |      |
| Storage Length (ft) | 100   |      | 0    | 150   |       | 0    | 0    |       | 0    | 0    | 0     | 0    |
| Storage Lanes       | 1     |      | 0    | 1     |       | 0    | 0    |       | 0    | 0    | 0     | 0    |
| Taper Length (ft)   | 50    |      |      | 50    |       |      | 50   |       |      | 50   |       |      |
| 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 |
| Ped Bike Factor     |       |      |      |       | 0.998 |      |      | 0.888 |      |      | 0.99  |      |
| Flt Protected       | 0.950 |      |      | 0.950 |       |      |      | 0.992 |      |      | 0.967 |      |
| Satd. Flow (prot)   | 1778  | 3557 | 0    | 1761  | 3514  | 0    | 0    | 1641  | 0    | 0    | 1716  | 0    |
| Flt Permitted       | 0.147 |      |      | 0.042 |       |      |      | 0.992 |      |      | 0.967 |      |
| Satd. Flow (perm)   | 275   | 3557 | 0    | 78    | 3514  | 0    | 0    | 1641  | 0    | 0    | 1716  | 0    |
| Right Turn on Red   |       |      | Yes  |       |       | Yes  |      |       | Yes  |      |       | Yes  |
| Satd. Flow (RTOR)   |       |      |      |       | 1     |      |      | 54    |      |      | 5     |      |
| Link Speed (mph)    |       | 35   |      |       | 35    |      |      | 25    |      |      | 25    |      |
| Link Distance (ft)  |       | 996  |      |       | 564   |      |      | 704   |      |      | 795   |      |
| Travel Time (s)     |       | 19.4 |      |       | 11.0  |      |      | 19.2  |      |      | 21.7  |      |

**Intersection Summary**

Area Type: Other

**Timings**  
13: Echols Ave & Seminary Rd

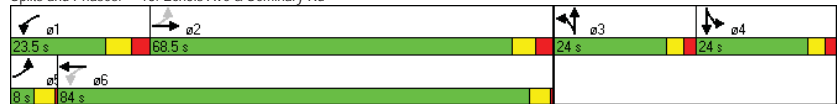
2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBT   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↖↗    | ↖     | ↖↗    | ↖↗    | ↖↗    |
| Volume (vph)         | 5     | 1795  | 100   | 1420  | 0     | 0     |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | NA    | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     | 3     | 4     |
| Permitted Phases     | 2     |       | 6     |       |       |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 3     | 4     |
| Switch Phase         |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 6.0   | 10.0  | 4.0   | 7.0   | 7.0   |
| Minimum Split (s)    | 8.0   | 13.0  | 23.5  | 20.0  | 24.0  | 24.0  |
| Total Split (s)      | 8.0   | 68.5  | 23.5  | 84.0  | 24.0  | 24.0  |
| Total Split (%)      | 5.7%  | 48.9% | 16.8% | 60.0% | 17.1% | 17.1% |
| Yellow Time (s)      | 3.5   | 4.0   | 4.5   | 3.5   | 3.0   | 3.0   |
| All-Red Time (s)     | 0.5   | 3.0   | 3.0   | 0.5   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -3.5  | -3.5  | -3.0  | -3.5  | -1.0  | -1.0  |
| Total Lost Time (s)  | 0.5   | 3.5   | 4.5   | 0.5   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |
| Recall Mode          | None  | C-Min | None  | C-Min | None  | None  |
| Act Effct Green (s)  | 107.4 | 95.6  | 113.3 | 115.8 | 11.0  | 10.4  |
| Actuated g/C Ratio   | 0.77  | 0.68  | 0.81  | 0.83  | 0.08  | 0.07  |
| v/c Ratio            | 0.02  | 0.79  | 0.46  | 0.53  | 0.37  | 0.12  |
| Control Delay        | 3.8   | 12.1  | 21.8  | 16.8  | 24.2  | 46.5  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 3.8   | 12.1  | 21.8  | 16.8  | 24.2  | 46.5  |
| LOS                  | A     | B     | C     | B     | C     | D     |
| Approach Delay       |       | 12.1  |       | 17.2  | 24.2  | 46.5  |
| Approach LOS         |       | B     |       | B     | C     | D     |

**Intersection Summary**

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 108 (77%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 145  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.79  
 Intersection Signal Delay: 14.7  
 Intersection LOS: B  
 Intersection Capacity Utilization 75.2%  
 ICU Level of Service D  
 Analysis Period (min) 15

**Splits and Phases:** 13: Echols Ave & Seminary Rd



**Phasings**  
13: Echols Ave & Seminary Rd

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBL  | EBT   | WBL   | WBT   | NBT   | SBT   |
|-------------------------|------|-------|-------|-------|-------|-------|
| Protected Phases        | 5    | 2     | 1     | 6     | 3     | 4     |
| Permitted Phases        | 2    |       | 6     |       |       |       |
| Minimum Initial (s)     | 4.0  | 6.0   | 10.0  | 4.0   | 7.0   | 7.0   |
| Minimum Split (s)       | 8.0  | 13.0  | 23.5  | 20.0  | 24.0  | 24.0  |
| Total Split (s)         | 8.0  | 68.5  | 23.5  | 84.0  | 24.0  | 24.0  |
| Total Split (%)         | 5.7% | 48.9% | 16.8% | 60.0% | 17.1% | 17.1% |
| Maximum Green (s)       | 4.0  | 61.5  | 16.0  | 80.0  | 19.0  | 19.0  |
| Yellow Time (s)         | 3.5  | 4.0   | 4.5   | 3.5   | 3.0   | 3.0   |
| All-Red Time (s)        | 0.5  | 3.0   | 3.0   | 0.5   | 2.0   | 2.0   |
| Lead/Lag                | Lead | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |      |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0  | 2.0   | 0.2   | 3.0   | 4.0   | 2.0   |
| Minimum Gap (s)         | 3.0  | 2.0   | 0.2   | 3.0   | 4.0   | 2.0   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | C-Min | None  | C-Min | None  | None  |
| Walk Time (s)           |      |       | 4.0   | 5.0   | 4.0   | 4.0   |
| Flash Dont Walk (s)     |      |       | 12.0  | 11.0  | 15.0  | 15.0  |
| Pedestrian Calls (#/hr) |      |       | 5     | 0     | 5     | 5     |
| 90th %ile Green (s)     | 4.0  | 61.5  | 16.0  | 80.0  | 19.0  | 19.0  |
| 90th %ile Term Code     | Max  | Coord | Ped   | Coord | Ped   | Ped   |
| 70th %ile Green (s)     | 0.0  | 89.2  | 10.0  | 109.7 | 9.3   | 7.0   |
| 70th %ile Term Code     | Skip | Coord | Min   | Coord | Gap   | Min   |
| 50th %ile Green (s)     | 0.0  | 91.0  | 10.0  | 111.5 | 7.5   | 7.0   |
| 50th %ile Term Code     | Skip | Coord | Min   | Coord | Gap   | Min   |
| 30th %ile Green (s)     | 0.0  | 103.5 | 10.0  | 124.0 | 7.0   | 0.0   |
| 30th %ile Term Code     | Skip | Coord | Min   | Coord | Min   | Skip  |
| 10th %ile Green (s)     | 0.0  | 115.5 | 10.0  | 136.0 | 0.0   | 0.0   |
| 10th %ile Term Code     | Skip | Coord | Min   | Coord | Skip  | Skip  |

**Intersection Summary**

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 108 (77%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
14: Dawes Ave & Seminary Rd

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL  | NBT   | NBR   | SBL  | SBT   | SBR   |
|---------------------|-------|------|------|-------|-------|------|------|-------|-------|------|-------|-------|
| Lane Configurations | ↔     | ↕    | ↔    | ↔     | ↕     | ↔    | ↔    | ↕     | ↔     | ↔    | ↕     | ↔     |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12   | 12   | 12    | 12    | 12   | 12    | 12    |
| Grade (%)           | 0%    |      | 0%   |       | 0%    |      | 0%   |       | 0%    |      | 0%    |       |
| Storage Length (ft) | 240   |      | 0    | 55    |       | 0    | 0    |       | 0     | 0    |       | 0     |
| Storage Lanes       | 1     |      | 0    | 1     |       | 0    | 0    |       | 0     | 0    |       | 1     |
| Taper Length (ft)   | 50    |      |      | 50    |       |      | 50   |       |       | 50   |       |       |
| 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  |
| Ped Bike Factor     | 1.00  |      |      |       | 1.00  |      |      |       | 0.99  |      | 0.96  |       |
| Frt                 |       |      |      |       | 0.994 |      |      |       | 0.927 |      | 0.850 |       |
| Flt Protected       | 0.950 |      |      | 0.950 |       |      |      |       | 0.987 |      |       | 0.962 |
| Satd. Flow (prot)   | 1770  | 3539 | 0    | 1770  | 3515  | 0    | 0    | 1684  | 0     | 0    | 1792  | 1583  |
| Flt Permitted       | 0.172 |      |      | 0.064 |       |      |      | 0.887 |       |      | 0.712 |       |
| Satd. Flow (perm)   | 320   | 3539 | 0    | 119   | 3515  | 0    | 0    | 1514  | 0     | 0    | 1326  | 1527  |
| Right Turn on Red   |       |      | Yes  |       |       | Yes  |      |       | Yes   |      |       | Yes   |
| Satd. Flow (RTOR)   |       |      |      |       | 7     |      |      |       | 32    |      |       | 54    |
| Link Speed (mph)    |       | 35   |      |       | 35    |      |      |       | 25    |      |       | 25    |
| Link Distance (ft)  |       | 294  |      |       | 996   |      |      |       | 786   |      |       | 1290  |
| Travel Time (s)     |       | 5.7  |      |       | 19.4  |      |      |       | 21.4  |      |       | 35.2  |

Intersection Summary

Area Type: Other

Timings  
14: Dawes Ave & Seminary Rd

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↔     |
| Volume (vph)         | 40    | 1675  | 150   | 1235  | 15    | 10    | 95    | 25    | 50    |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | NA    | Perm  |
| Protected Phases     | 5     | 2     | 1     | 6     |       | 4     |       | 4     |       |
| Permitted Phases     | 2     |       | 6     |       | 4     |       | 4     |       | 4     |
| Detector Phase       | 5     | 2     | 1     | 6     | 4     | 4     | 4     | 4     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 10.0  | 4.0   | 10.0  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)    | 9.0   | 30.0  | 9.0   | 16.0  | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  |
| Total Split (s)      | 9.0   | 91.0  | 21.0  | 103.0 | 28.0  | 28.0  | 28.0  | 28.0  | 28.0  |
| Total Split (%)      | 6.4%  | 65.0% | 15.0% | 73.6% | 20.0% | 20.0% | 20.0% | 20.0% | 20.0% |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | -1.0  | -2.0  | -1.0  | -2.0  | -2.0  | -2.0  | -2.0  | -2.0  | -2.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 100.9 | 95.9  | 112.9 | 105.7 |       | 19.1  |       | 19.1  | 19.1  |
| Actuated g/C Ratio   | 0.72  | 0.68  | 0.81  | 0.76  |       | 0.14  |       | 0.14  | 0.14  |
| v/c Ratio            | 0.15  | 0.74  | 0.65  | 0.52  |       | 0.25  |       | 0.71  | 0.21  |
| Control Delay        | 5.4   | 18.1  | 49.0  | 5.5   |       | 29.9  |       | 78.3  | 14.4  |
| Queue Delay          | 0.0   | 2.8   | 0.0   | 0.0   |       | 0.0   |       | 0.0   | 0.0   |
| Total Delay          | 5.4   | 20.9  | 49.0  | 5.5   |       | 29.9  |       | 78.3  | 14.4  |
| LOS                  | A     | C     | D     | A     |       | C     |       | E     | B     |
| Approach Delay       |       | 20.5  |       | 10.1  |       | 29.9  |       | 59.4  |       |
| Approach LOS         |       | C     |       | B     |       | C     |       | E     |       |

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 80 (57%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 90  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.74  
 Intersection Signal Delay: 18.2  
 Intersection LOS: B  
 Intersection Capacity Utilization 79.4%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 14: Dawes Ave & Seminary Rd





Phasings  
14: Dawes Ave & Seminary Rd

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBL  | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|-------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 5    | 2     | 1     | 6     |       | 4     |       | 4     |       |
| Permitted Phases        | 2    |       | 6     |       | 4     |       | 4     |       | 4     |
| Minimum Initial (s)     | 4.0  | 10.0  | 4.0   | 10.0  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)       | 9.0  | 30.0  | 9.0   | 16.0  | 27.0  | 27.0  | 27.0  | 27.0  | 27.0  |
| Total Split (s)         | 9.0  | 91.0  | 21.0  | 103.0 | 28.0  | 28.0  | 28.0  | 28.0  | 28.0  |
| Total Split (%)         | 6.4% | 65.0% | 15.0% | 73.6% | 20.0% | 20.0% | 20.0% | 20.0% | 20.0% |
| Maximum Green (s)       | 4.0  | 85.0  | 16.0  | 97.0  | 22.0  | 22.0  | 22.0  | 22.0  | 22.0  |
| Yellow Time (s)         | 3.0  | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0  | 2.0   | 2.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead | Lag   | Lead  | Lag   |       |       |       |       |       |
| Lead-Lag Optimize?      |      |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0  | 0.2   | 2.0   | 0.2   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Minimum Gap (s)         | 2.0  | 0.2   | 2.0   | 0.2   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | C-Max | None  | C-Max | None  | None  | None  | None  | None  |
| Walk Time (s)           | 4.0  |       |       |       | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Flash Dont Walk (s)     |      | 20.0  |       |       | 17.0  | 17.0  | 17.0  | 17.0  | 17.0  |
| Pedestrian Calls (#/hr) |      | 5     |       |       | 5     | 5     | 5     | 5     | 5     |
| 90th %ile Green (s)     | 4.0  | 85.0  | 16.0  | 97.0  | 22.0  | 22.0  | 22.0  | 22.0  | 22.0  |
| 90th %ile Term Code     | Max  | Coord | Max   | Coord | Max   | Max   | Max   | Max   | Max   |
| 70th %ile Green (s)     | 4.0  | 86.8  | 15.3  | 98.1  | 20.9  | 20.9  | 20.9  | 20.9  | 20.9  |
| 70th %ile Term Code     | Max  | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Gap   | Gap   |
| 50th %ile Green (s)     | 4.0  | 92.7  | 12.5  | 101.2 | 17.8  | 17.8  | 17.8  | 17.8  | 17.8  |
| 50th %ile Term Code     | Max  | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Gap   | Gap   |
| 30th %ile Green (s)     | 4.0  | 98.4  | 9.9   | 104.3 | 14.7  | 14.7  | 14.7  | 14.7  | 14.7  |
| 30th %ile Term Code     | Max  | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Gap   | Gap   |
| 10th %ile Green (s)     | 0.0  | 106.7 | 6.1   | 117.8 | 10.2  | 10.2  | 10.2  | 10.2  | 10.2  |
| 10th %ile Term Code     | Skip | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Gap   | Gap   |

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 80 (57%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
15: Beauregard St & Mark Center Dr

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT  | WBR   | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|-------|------|-------|------|-------|-------|------|-------|-------|-------|------|
| Lane Configurations |       |       |      |       |      |       |       |      |       |       |       |      |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           |       | 0%    |      |       | 0%   |       |       | 0%   |       |       | 0%    |      |
| Storage Length (ft) | 0     |       | 0    | 0     |      | 200   | 190   |      | 200   | 0     |       | 0    |
| Storage Lanes       | 1     |       | 0    | 1     |      | 1     | 1     |      | 1     | 0     |       | 0    |
| Taper Length (ft)   | 50    |       |      | 50    |      |       | 50    |      | 50    |       |       | 50   |
| Lane Util. Factor   | 1.00  | 1.00  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00  | 0.91 | 1.00  | 0.97  | 0.95  | 0.95 |
| Ped Bike Factor     |       |       |      |       |      | 0.99  |       |      |       |       | 1.00  |      |
| Frt                 |       | 0.911 |      |       |      | 0.850 |       |      | 0.850 |       | 0.991 |      |
| Flt Protected       | 0.950 |       |      | 0.950 |      |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (prot)   | 1770  | 1697  | 0    | 1770  | 1863 | 1583  | 1770  | 5085 | 1583  | 3433  | 3503  | 0    |
| Flt Permitted       | 0.723 |       |      | 0.722 |      |       | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (perm)   | 1347  | 1697  | 0    | 1345  | 1863 | 1561  | 1770  | 5085 | 1583  | 3433  | 3503  | 0    |
| Right Turn on Red   |       |       | Yes  |       |      | Yes   |       | Yes  |       | Yes   |       | Yes  |
| Satd. Flow (RTOR)   |       | 32    |      |       |      | 156   |       |      | 54    |       | 9     |      |
| Link Speed (mph)    |       | 25    |      |       | 25   |       |       | 35   |       |       | 35    |      |
| Link Distance (ft)  |       | 275   |      |       | 957  |       |       | 796  |       |       | 762   |      |
| Travel Time (s)     |       | 7.5   |      |       | 26.1 |       |       | 15.5 |       |       | 14.8  |      |

Intersection Summary

Area Type: Other

Timings  
15: Beauregard St & Mark Center Dr

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |      |       |       |       |       |
| Volume (vph)         | 220   | 20    | 315   | 5     | 145   | 5    | 890   | 50    | 205   | 1640  |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | Prot | NA    | Perm  | Prot  | NA    |
| Protected Phases     | 7     | 4     | 3     | 8     |       | 5    | 2     |       | 1     | 6     |
| Permitted Phases     | 4     |       | 8     |       | 8     |      |       | 2     |       |       |
| Detector Phase       | 7     | 4     | 3     | 8     | 8     | 5    | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |      |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 7.0   | 4.0   | 4.0   | 4.0   | 4.0  | 10.0  | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 8.0   | 33.0  | 8.0   | 20.0  | 20.0  | 9.0  | 24.0  | 24.0  | 9.0   | 24.0  |
| Total Split (s)      | 14.0  | 33.0  | 11.0  | 30.0  | 30.0  | 9.0  | 59.0  | 59.0  | 17.0  | 67.0  |
| Total Split (%)      | 11.7% | 27.5% | 9.2%  | 25.0% | 25.0% | 7.5% | 49.2% | 49.2% | 14.2% | 55.8% |
| Yellow Time (s)      | 3.5   | 3.0   | 3.5   | 3.5   | 3.5   | 4.0  | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 0.5   | 3.0   | 0.5   | 0.5   | 0.5   | 2.0  | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.0  | -2.0  | -2.0  | -2.0  | 0.0   | -1.0 | -2.0  | 0.0   | -1.0  | -2.0  |
| Total Lost Time (s)  | 2.0   | 4.0   | 2.0   | 2.0   | 4.0   | 4.0  | 6.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   | Yes   |       |       |       |       |      |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None | C-Max | C-Max | None  | C-Max |
| Act Effct Green (s)  | 24.5  | 13.5  | 22.4  | 12.4  | 10.4  | 5.0  | 71.6  | 69.6  | 12.0  | 85.8  |
| Actuated g/C Ratio   | 0.20  | 0.11  | 0.19  | 0.10  | 0.09  | 0.04 | 0.60  | 0.58  | 0.10  | 0.72  |
| v/c Ratio            | 0.75  | 0.25  | 1.16  | 0.03  | 0.56  | 0.07 | 0.32  | 0.06  | 0.64  | 0.75  |
| Control Delay        | 57.2  | 25.0  | 145.1 | 42.6  | 14.9  | 64.4 | 6.9   | 2.6   | 60.7  | 15.3  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 1.1   |
| Total Delay          | 57.2  | 25.0  | 145.1 | 42.6  | 14.9  | 64.4 | 6.9   | 2.6   | 60.7  | 16.4  |
| LOS                  | E     | C     | F     | D     | B     | E    | A     | A     | E     | B     |
| Approach Delay       | 51.2  |       | 103.5 |       |       | 6.9  |       |       | 21.0  |       |
| Approach LOS         | D     |       | F     |       |       | A    |       |       | C     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 119 (99%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.16  
 Intersection Signal Delay: 30.2  
 Intersection LOS: C  
 Intersection Capacity Utilization 86.3%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 15: Beauregard St & Mark Center Dr



Phasings  
15: Beauregard St & Mark Center Dr

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBL   | EBT   | WBL  | WBT   | WBR   | NBL  | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|------|-------|-------|------|-------|-------|-------|-------|
| Protected Phases        | 7     | 4     | 3    | 8     |       | 5    | 2     |       | 1     | 6     |
| Permitted Phases        | 4     |       | 8    |       | 8     |      |       | 2     |       |       |
| Minimum Initial (s)     | 4.0   | 7.0   | 4.0  | 4.0   | 4.0   | 4.0  | 10.0  | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)       | 8.0   | 33.0  | 8.0  | 20.0  | 20.0  | 9.0  | 24.0  | 24.0  | 9.0   | 24.0  |
| Total Split (s)         | 14.0  | 33.0  | 11.0 | 30.0  | 30.0  | 9.0  | 59.0  | 59.0  | 17.0  | 67.0  |
| Total Split (%)         | 11.7% | 27.5% | 9.2% | 25.0% | 25.0% | 7.5% | 49.2% | 49.2% | 14.2% | 55.8% |
| Maximum Green (s)       | 10.0  | 27.0  | 7.0  | 26.0  | 26.0  | 4.0  | 53.0  | 53.0  | 12.0  | 61.0  |
| Yellow Time (s)         | 3.5   | 3.0   | 3.5  | 3.5   | 3.5   | 3.0  | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 0.5   | 3.0   | 0.5  | 0.5   | 0.5   | 2.0  | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead  | Lag   | Lead | Lag   | Lag   | Lead | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      | Yes   |       |      |       |       |      |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 2.0   | 3.0  | 3.0   | 3.0   | 2.0  | 0.2   | 0.2   | 2.0   | 0.2   |
| Minimum Gap (s)         | 3.0   | 2.0   | 3.0  | 3.0   | 3.0   | 2.0  | 0.2   | 0.2   | 2.0   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None | None  | None  | None | C-Max | C-Max | None  | C-Max |
| Walk Time (s)           | 8.0   |       | 5.0  |       |       | 5.0  |       | 6.0   |       | 6.0   |
| Flash Dont Walk (s)     | 19.0  |       | 11.0 |       |       | 11.0 |       | 12.0  |       | 12.0  |
| Pedestrian Calls (#/hr) | 5     |       | 0    |       |       | 0    |       | 5     |       | 5     |
| 90th %ile Green (s)     | 10.0  | 27.0  | 7.0  | 26.0  | 26.0  | 4.0  | 53.0  | 53.0  | 12.0  | 61.0  |
| 90th %ile Term Code     | Max   | Ped   | Max  | Hold  | Hold  | Max  | Coord | Coord | Max   | Coord |
| 70th %ile Green (s)     | 10.0  | 9.5   | 7.0  | 8.5   | 8.5   | 0.0  | 70.5  | 70.5  | 12.0  | 87.5  |
| 70th %ile Term Code     | Max   | Hold  | Max  | Gap   | Gap   | Skip | Coord | Coord | Max   | Coord |
| 50th %ile Green (s)     | 10.0  | 7.0   | 7.0  | 6.0   | 6.0   | 0.0  | 73.0  | 73.0  | 12.0  | 90.0  |
| 50th %ile Term Code     | Max   | Min   | Max  | Hold  | Hold  | Skip | Coord | Coord | Max   | Coord |
| 30th %ile Green (s)     | 10.0  | 7.0   | 7.0  | 6.0   | 6.0   | 0.0  | 74.4  | 74.4  | 10.6  | 90.0  |
| 30th %ile Term Code     | Max   | Min   | Max  | Hold  | Hold  | Skip | Coord | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 10.0  | 0.0   | 19.5 | 5.5   | 5.5   | 0.0  | 77.0  | 77.0  | 8.5   | 90.5  |
| 10th %ile Term Code     | Max   | Skip  | Hold | Gap   | Gap   | Skip | Coord | Coord | Gap   | Coord |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 119 (99%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
16: Beauregard St & Highview Ln

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR  | NBL   | NBT  | NBR  | SBL   | SBT   | SBR  |
|---------------------|-------|------|------|-------|-------|------|-------|------|------|-------|-------|------|
| Lane Configurations | ↔     | ↔    | ↔    | ↔     | ↔     | ↔    | ↔     | ↔    | ↔    | ↔     | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12   | 12    | 12   | 12   | 12    | 12    | 12   |
| Grade (%)           | 0%    |      |      |       | 0%    |      | 0%    |      |      |       | -1%   |      |
| Storage Length (ft) | 0     |      | 150  | 115   |       | 0    | 185   |      | 0    | 185   |       | 0    |
| Storage Lanes       | 1     |      | 1    | 1     |       | 0    | 1     |      | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50    |      |      | 50    |       |      | 50    |      |      | 50    |       |      |
| 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     | 0.99  |      |      |       | 0.98  |      | 1.00  |      |      |       | 1.00  |      |
| Frt                 | 0.897 |      |      |       | 0.860 |      | 0.998 |      |      |       | 0.992 |      |
| Flt Protected       | 0.950 |      |      | 0.950 |       |      | 0.950 |      |      | 0.950 |       |      |
| Satd. Flow (prot)   | 1770  | 1655 | 0    | 1770  | 1573  | 0    | 1770  | 3531 | 0    | 1778  | 3522  | 0    |
| Flt Permitted       | 0.708 |      |      | 0.747 |       |      | 0.044 |      |      | 0.312 |       |      |
| Satd. Flow (perm)   | 1319  | 1655 | 0    | 1391  | 1573  | 0    | 82    | 3531 | 0    | 584   | 3522  | 0    |
| Right Turn on Red   |       |      | Yes  |       |       | Yes  |       |      | Yes  |       |       | Yes  |
| Satd. Flow (RTOR)   | 11    |      |      |       | 70    |      | 2     |      |      |       | 8     |      |
| Link Speed (mph)    | 25    |      |      |       | 25    |      | 35    |      |      |       | 35    |      |
| Link Distance (ft)  | 429   |      |      |       | 351   |      | 718   |      |      |       | 796   |      |
| Travel Time (s)     | 11.7  |      |      |       | 9.6   |      | 14.0  |      |      |       | 15.5  |      |

Intersection Summary

Area Type: Other

Timings  
16: Beauregard St & Highview Ln

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 60    | 5     | 55    | 5     | 35    | 820   | 10    | 1875  |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 4     |       | 4     |       | 4     |       | 5     |       |
| Permitted Phases     | 4     |       | 4     |       | 2     |       | 6     |       |
| Detector Phase       | 4     |       | 4     |       | 5     |       | 2     |       |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 31.0  | 31.0  | 31.0  | 31.0  | 9.0   | 31.0  | 9.0   | 31.0  |
| Total Split (s)      | 31.0  | 31.0  | 31.0  | 31.0  | 9.0   | 80.0  | 9.0   | 80.0  |
| Total Split (%)      | 25.8% | 25.8% | 25.8% | 25.8% | 7.5%  | 66.7% | 7.5%  | 66.7% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  | 11.4  | 11.4  | 11.4  | 11.4  | 96.7  | 94.4  | 94.2  | 89.8  |
| Actuated g/C Ratio   | 0.10  | 0.10  | 0.10  | 0.10  | 0.81  | 0.79  | 0.78  | 0.75  |
| v/c Ratio            | 0.52  | 0.10  | 0.44  | 0.35  | 0.25  | 0.32  | 0.02  | 0.81  |
| Control Delay        | 65.2  | 29.1  | 60.7  | 17.3  | 13.3  | 2.6   | 1.6   | 10.7  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.1   |
| Total Delay          | 65.2  | 29.1  | 60.7  | 17.3  | 13.3  | 2.6   | 1.6   | 10.8  |
| LOS                  | E     | C     | E     | B     | B     | A     | A     | B     |
| Approach Delay       | 58.0  |       | 36.4  |       | 3.1   |       | 10.7  |       |
| Approach LOS         | E     |       | D     |       | A     |       | B     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 113 (94%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.81  
 Intersection Signal Delay: 10.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 76.5%  
 ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 16: Beauregard St & Highview Ln



Phasings  
16: Beauregard St & Highview Ln

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL  | NBT   | SBL  | SBT   |
|-------------------------|-------|-------|-------|-------|------|-------|------|-------|
| Protected Phases        |       | 4     |       | 4     | 5    | 2     | 1    | 6     |
| Permitted Phases        | 4     |       | 4     |       | 2    |       | 6    |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 4.0  | 10.0  | 4.0  | 10.0  |
| Minimum Split (s)       | 31.0  | 31.0  | 31.0  | 31.0  | 9.0  | 31.0  | 9.0  | 31.0  |
| Total Split (s)         | 31.0  | 31.0  | 31.0  | 31.0  | 9.0  | 80.0  | 9.0  | 80.0  |
| Total Split (%)         | 25.8% | 25.8% | 25.8% | 25.8% | 7.5% | 66.7% | 7.5% | 66.7% |
| Maximum Green (s)       | 25.0  | 25.0  | 25.0  | 25.0  | 4.0  | 74.0  | 4.0  | 74.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 2.0  | 2.0   | 2.0  | 2.0   |
| Lead/Lag                |       |       |       |       | Lead | Lag   | Lead | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |      |       |      |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0  | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0  | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None | C-Max | None | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   |      | 7.0   |      | 7.0   |
| Flash Dont Walk (s)     | 18.0  | 18.0  | 18.0  | 18.0  |      | 18.0  |      | 18.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     |      | 0     |      | 0     |
| 90th %ile Green (s)     | 16.4  | 16.4  | 16.4  | 16.4  | 6.8  | 80.6  | 6.0  | 79.8  |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap  | Coord | Gap  | Coord |
| 70th %ile Green (s)     | 13.3  | 13.3  | 13.3  | 13.3  | 6.2  | 94.7  | 0.0  | 83.5  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap  | Coord | Skip | Coord |
| 50th %ile Green (s)     | 11.3  | 11.3  | 11.3  | 11.3  | 5.9  | 96.7  | 0.0  | 85.8  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap  | Coord | Skip | Coord |
| 30th %ile Green (s)     | 9.2   | 9.2   | 9.2   | 9.2   | 0.0  | 98.8  | 0.0  | 98.8  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Skip | Coord | Skip | Coord |
| 10th %ile Green (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 0.0  | 101.0 | 0.0  | 101.0 |
| 10th %ile Term Code     | Min   | Min   | Min   | Min   | Skip | Coord | Skip | Coord |

| Intersection Summary  |  |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|--|
| Cycle Length: 120   |  |  |  |  |  |  |  |  |
| Actuated Cycle Length: 120  |  |  |  |  |  |  |  |  |
| Offset: 113 (94%), Referenced to phase 2:NBL and 6:SBTL, Start of Green |  |  |  |  |  |  |  |  |
| Control Type: Actuated-Coordinated                                      |  |  |  |  |  |  |  |  |

Lanes and Geometrics  
18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT   | NBR  | SBL   | SBT  | SBR   |
|---------------------|-------|------|-------|-------|-------|------|-------|-------|------|-------|------|-------|
| Lane Configurations |       |      |       |       |       |      |       |       |      |       |      |       |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12   | 12    |
| Grade (%)           |       | 0%   |       |       | 0%    |      |       | 0%    |      |       | 0%   |       |
| Storage Length (ft) | 235   |      | 0     | 0     |       | 0    | 235   |       | 0    | 150   |      | 170   |
| Storage Lanes       | 1     |      | 1     | 1     |       | 1    | 1     |       | 0    | 1     |      | 1     |
| Taper Length (ft)   | 50    |      |       | 50    |       |      | 50    |       |      | 50    |      |       |
| Lane Util. Factor   | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00 | 0.97  | 0.95  | 0.95 | 1.00  | 0.95 | 1.00  |
| Ped Bike Factor     |       |      |       |       | 1.00  |      |       |       |      |       |      | 0.98  |
| Frnt                |       |      | 0.850 |       | 0.970 |      |       | 0.997 |      |       |      | 0.850 |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (prot)   | 1770  | 1863 | 1583  | 1770  | 1798  | 0    | 3433  | 3529  | 0    | 1770  | 3539 | 1417  |
| Flt Permitted       | 0.704 |      |       | 0.719 |       |      | 0.950 |       |      | 0.950 |      |       |
| Satd. Flow (perm)   | 1311  | 1863 | 1583  | 1339  | 1798  | 0    | 3433  | 3529  | 0    | 1770  | 3539 | 1388  |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |       |       | Yes  |       |      | Yes   |
| Satd. Flow (RTOR)   |       |      | 565   |       | 14    |      |       | 3     |      |       |      | 295   |
| Link Speed (mph)    |       | 35   |       |       | 15    |      |       | 35    |      |       |      | 35    |
| Link Distance (ft)  |       | 1573 |       |       | 252   |      |       | 414   |      |       |      | 921   |
| Travel Time (s)     |       | 30.6 |       |       | 11.5  |      |       | 8.1   |      |       |      | 17.9  |

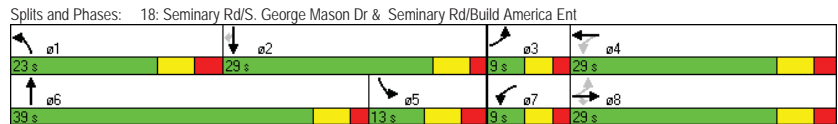
| Intersection Summary |       |
|----------------------|-------|
| Area Type:           | Other |

**Timings** 2020 Market with Traffic Mitigation  
**18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent** PM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↗     | ↘     | ↔     | ↗     | ↘     | ↔     | ↗     | ↘     | ↔     |
| Volume (vph)         | 80    | 55    | 755   | 105   | 60    | 645   | 640   | 75    | 860   | 310   |
| Turn Type            | pm+pt | NA    | Perm  | pm+pt | NA    | Prot  | NA    | Prot  | NA    | Perm  |
| Protected Phases     | 3     | 8     |       | 7     | 4     | 1     | 6     | 5     | 2     |       |
| Permitted Phases     | 8     |       | 8     | 4     |       |       |       |       |       | 2     |
| Detector Phase       | 3     | 8     | 8     | 7     | 4     | 1     | 6     | 5     | 2     | 2     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 5.0   | 5.0   | 4.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)    | 9.0   | 27.5  | 27.5  | 9.0   | 11.5  | 12.0  | 11.0  | 12.0  | 24.0  | 24.0  |
| Total Split (s)      | 9.0   | 29.0  | 29.0  | 9.0   | 29.0  | 23.0  | 39.0  | 13.0  | 29.0  | 29.0  |
| Total Split (%)      | 10.0% | 32.2% | 32.2% | 10.0% | 32.2% | 25.6% | 43.3% | 14.4% | 32.2% | 32.2% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.5   | 2.5   | 2.0   | 2.5   | 3.0   | 2.0   | 3.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | -3.0  | -3.0  | -3.0  | -2.0  | -3.0  | -2.0  | -2.0  |
| Total Lost Time (s)  | 2.5   | 4.0   | 4.0   | 2.0   | 3.5   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | Min   | Max   | None  | None  | None  |
| Act Effct Green (s)  | 30.2  | 23.7  | 23.7  | 27.9  | 21.7  | 19.1  | 38.1  | 9.0   | 25.0  | 25.0  |
| Actuated g/C Ratio   | 0.35  | 0.27  | 0.27  | 0.32  | 0.25  | 0.22  | 0.44  | 0.10  | 0.29  | 0.29  |
| v/c Ratio            | 0.18  | 0.12  | 0.96  | 0.24  | 0.18  | 0.92  | 0.45  | 0.44  | 0.91  | 0.55  |
| Control Delay        | 18.5  | 25.1  | 34.5  | 19.4  | 21.8  | 53.2  | 20.3  | 46.4  | 45.0  | 8.8   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 18.5  | 25.1  | 34.5  | 19.4  | 21.8  | 53.2  | 20.3  | 46.4  | 45.0  | 8.8   |
| LOS                  | B     | C     | C     | B     | C     | D     | C     | D     | D     | A     |
| Approach Delay       |       | 32.5  |       |       | 20.4  |       | 36.6  |       | 36.1  |       |
| Approach LOS         |       | C     |       |       | C     |       | D     |       | D     |       |

**Intersection Summary**

Cycle Length: 90  
 Actuated Cycle Length: 86.8  
 Natural Cycle: 90  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.96  
 Intersection Signal Delay: 34.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 86.3%  
 ICU Level of Service E  
 Analysis Period (min) 15



**Phasings** 2020 Market with Traffic Mitigation  
**18: Seminary Rd/S. George Mason Dr & Seminary Rd/Build America Ent** PM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 3     | 8     |       | 7     | 4     | 1     | 6     | 5     | 2     |       |
| Permitted Phases        | 8     |       | 8     | 4     |       |       |       |       |       | 2     |
| Minimum Initial (s)     | 4.0   | 5.0   | 5.0   | 4.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)       | 9.0   | 27.5  | 27.5  | 9.0   | 11.5  | 12.0  | 11.0  | 12.0  | 24.0  | 24.0  |
| Total Split (s)         | 9.0   | 29.0  | 29.0  | 9.0   | 29.0  | 23.0  | 39.0  | 13.0  | 29.0  | 29.0  |
| Total Split (%)         | 10.0% | 32.2% | 32.2% | 10.0% | 32.2% | 25.6% | 43.3% | 14.4% | 32.2% | 32.2% |
| Maximum Green (s)       | 4.0   | 22.5  | 22.5  | 4.0   | 22.5  | 16.0  | 33.0  | 6.0   | 23.0  | 23.0  |
| Yellow Time (s)         | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 2.0   | 2.5   | 2.5   | 2.0   | 2.5   | 3.0   | 2.0   | 3.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | Min   | Max   | None  | None  | None  |
| Walk Time (s)           |       | 7.0   | 7.0   |       |       |       |       |       | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       | 14.0  | 14.0  |       |       |       |       |       | 11.0  | 11.0  |
| Pedestrian Calls (#/hr) |       | 0     | 0     |       |       |       |       |       | 0     | 0     |
| 90th %ile Green (s)     | 4.0   | 22.5  | 22.5  | 4.0   | 22.5  | 16.0  | 33.0  | 6.0   | 23.0  | 23.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Hold  | Max   | MaxR  | Max   | Max   | Max   |
| 70th %ile Green (s)     | 4.0   | 22.5  | 22.5  | 4.0   | 22.5  | 16.0  | 33.0  | 6.0   | 23.0  | 23.0  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Hold  | Max   | MaxR  | Max   | Max   | Max   |
| 50th %ile Green (s)     | 4.0   | 22.5  | 22.5  | 4.0   | 22.5  | 16.0  | 33.0  | 6.0   | 23.0  | 23.0  |
| 50th %ile Term Code     | Max   | Max   | Max   | Max   | Hold  | Max   | MaxR  | Max   | Max   | Max   |
| 30th %ile Green (s)     | 4.0   | 22.5  | 22.5  | 4.0   | 22.5  | 16.0  | 33.0  | 6.0   | 23.0  | 23.0  |
| 30th %ile Term Code     | Max   | Max   | Max   | Max   | Hold  | Max   | MaxR  | Max   | Max   | Max   |
| 10th %ile Green (s)     | 0.0   | 16.3  | 16.3  | 0.0   | 0.0   | 16.0  | 45.2  | 0.0   | 22.2  | 22.2  |
| 10th %ile Term Code     | Skip  | Gap   | Gap   | Skip  | Skip  | Max   | Hold  | Skip  | Gap   | Gap   |

**Intersection Summary**

Cycle Length: 90  
 Actuated Cycle Length: 86.8  
 Control Type: Semi Act-Uncoord  
 90th %ile Actuated Cycle: 90  
 70th %ile Actuated Cycle: 90  
 50th %ile Actuated Cycle: 90  
 30th %ile Actuated Cycle: 90  
 10th %ile Actuated Cycle: 74

Lanes and Geometrics  
20: Hampton Dr & Braddock Rd

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT   | NBR   | SBL  | SBT   | SBR  |
|---------------------|-------|------|-------|-------|-------|------|-------|-------|-------|------|-------|------|
| Lane Configurations | ↔     | ↕    | ↔     | ↔     | ↕     | ↔    | ↔     | ↕     | ↔     | ↔    | ↕     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |      | 0%    |       | 0%    |      | 0%    |       | 0%    |      | 0%    |      |
| Storage Length (ft) | 170   |      | 0     | 125   |       | 0    | 0     |       | 0     | 0    |       | 0    |
| Storage Lanes       | 1     |      | 0     | 1     |       | 0    | 0     |       | 1     | 0    |       | 1    |
| Taper Length (ft)   | 50    |      |       | 50    |       |      | 50    |       |       | 50   |       |      |
| 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 |
| Ped Bike Factor     | 1.00  |      | 1.00  |       | 1.00  |      | 1.00  |       | 1.00  |      | 1.00  |      |
| Frt                 | 0.992 |      | 0.969 |       | 0.850 |      | 0.850 |       | 0.850 |      | 0.850 |      |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      |       | 0.972 |       |      | 0.962 |      |
| Satd. Flow (prot)   | 1770  | 3508 | 0     | 1770  | 3420  | 0    | 0     | 1811  | 1583  | 0    | 1792  | 1583 |
| Flt Permitted       | 0.465 |      |       | 0.469 |       |      |       | 0.774 |       |      | 0.744 |      |
| Satd. Flow (perm)   | 866   | 3508 | 0     | 874   | 3420  | 0    | 0     | 1442  | 1583  | 0    | 1386  | 1561 |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |       |       | Yes   |      |       | Yes  |
| Satd. Flow (RTOR)   | 6     |      | 34    |       | 16    |      | 16    |       | 16    |      | 124   |      |
| Link Speed (mph)    | 35    |      | 35    |       | 25    |      | 25    |       | 25    |      | 25    |      |
| Link Distance (ft)  | 1840  |      | 1126  |       | 416   |      | 416   |       | 1381  |      | 1381  |      |
| Travel Time (s)     | 35.8  |      | 21.9  |       | 11.3  |      | 11.3  |       | 37.7  |      | 37.7  |      |

Intersection Summary

Area Type: Other

Timings  
20: Hampton Dr & Braddock Rd

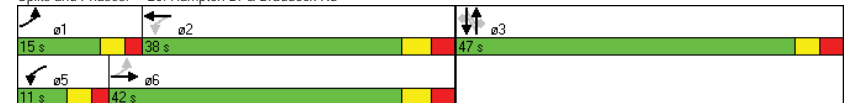
2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↕     | ↔     | ↕     | ↔     | ↕     | ↔     | ↔     | ↕     | ↔     |
| Volume (vph)         | 65    | 440   | 35    | 345   | 20    | 15    | 15    | 175   | 45    | 115   |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | Perm  | NA    | Perm  |
| Protected Phases     | 1     | 6     | 5     | 2     |       | 3     |       | 3     |       | 3     |
| Permitted Phases     | 6     | 2     |       |       | 3     |       | 3     | 3     |       | 3     |
| Detector Phase       | 1     | 6     | 5     | 2     | 3     | 3     | 3     | 3     | 3     | 3     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 9.0   | 16.5  | 9.0   | 16.5  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  |
| Total Split (s)      | 15.0  | 42.0  | 11.0  | 38.0  | 47.0  | 47.0  | 47.0  | 47.0  | 47.0  | 47.0  |
| Total Split (%)      | 15.0% | 42.0% | 11.0% | 38.0% | 47.0% | 47.0% | 47.0% | 47.0% | 47.0% | 47.0% |
| Yellow Time (s)      | 3.0   | 3.5   | 3.0   | 3.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| 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)  | 5.0   | 6.5   | 5.0   | 6.5   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   |       |       |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 64.3  | 58.8  | 62.1  | 56.2  | 22.2  | 22.2  | 22.2  | 22.2  | 22.2  | 22.2  |
| Actuated g/C Ratio   | 0.64  | 0.59  | 0.62  | 0.56  | 0.22  | 0.22  | 0.22  | 0.22  | 0.22  | 0.22  |
| v/c Ratio            | 0.11  | 0.24  | 0.06  | 0.24  | 0.12  | 0.04  | 0.04  | 0.04  | 0.04  | 0.04  |
| Control Delay        | 3.8   | 6.3   | 6.0   | 10.5  | 28.7  | 11.7  | 11.7  | 11.7  | 11.7  | 11.7  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 3.8   | 6.3   | 6.0   | 10.5  | 28.7  | 11.7  | 11.7  | 11.7  | 11.7  | 11.7  |
| LOS                  | A     | A     | A     | B     | C     | B     | B     | B     | D     | A     |
| Approach Delay       | 6.0   |       | 10.2  |       | 23.6  |       | 36.2  |       | 36.2  |       |
| Approach LOS         | A     |       | B     |       | C     |       | D     |       | D     |       |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 50 (50%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 15.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 49.9%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 20: Hampton Dr & Braddock Rd



Phasings  
20: Hampton Dr & Braddock Rd

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 1     | 6     | 5     | 2     |       | 3     |       |       | 3     |       |
| Permitted Phases        | 6     |       | 2     |       | 3     |       | 3     | 3     |       | 3     |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 9.0   | 16.5  | 9.0   | 16.5  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  | 34.0  |
| Total Split (s)         | 15.0  | 42.0  | 11.0  | 38.0  | 47.0  | 47.0  | 47.0  | 47.0  | 47.0  | 47.0  |
| Total Split (%)         | 15.0% | 42.0% | 11.0% | 38.0% | 47.0% | 47.0% | 47.0% | 47.0% | 47.0% | 47.0% |
| Maximum Green (s)       | 10.0  | 35.5  | 6.0   | 31.5  | 41.0  | 41.0  | 41.0  | 41.0  | 41.0  | 41.0  |
| Yellow Time (s)         | 3.0   | 3.5   | 3.0   | 3.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   |       |       |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 4.0   | 2.0   | 4.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Minimum Gap (s)         | 2.0   | 3.0   | 2.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | C-Max | None  | C-Max | None  | None  | None  | None  | None  | None  |
| Walk Time (s)           |       |       |       |       | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |       |       |       | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  | 21.0  |
| Pedestrian Calls (#/hr) |       |       |       |       | 0     | 0     | 0     | 0     | 0     | 0     |
| 90th %ile Green (s)     | 7.9   | 44.4  | 6.6   | 43.1  | 31.5  | 31.5  | 31.5  | 31.5  | 31.5  | 31.5  |
| 90th %ile Term Code     | Gap   | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |
| 70th %ile Green (s)     | 6.6   | 50.4  | 5.7   | 49.5  | 26.4  | 26.4  | 26.4  | 26.4  | 26.4  | 26.4  |
| 70th %ile Term Code     | Gap   | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |
| 50th %ile Green (s)     | 5.8   | 55.3  | 5.2   | 54.7  | 22.0  | 22.0  | 22.0  | 22.0  | 22.0  | 22.0  |
| 50th %ile Term Code     | Gap   | Coord | Gap   | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |
| 30th %ile Green (s)     | 5.2   | 69.2  | 0.0   | 59.0  | 18.3  | 18.3  | 18.3  | 18.3  | 18.3  | 18.3  |
| 30th %ile Term Code     | Gap   | Coord | Skip  | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |
| 10th %ile Green (s)     | 0.0   | 74.5  | 0.0   | 74.5  | 13.0  | 13.0  | 13.0  | 13.0  | 13.0  | 13.0  |
| 10th %ile Term Code     | Skip  | Coord | Skip  | Coord | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   |

Intersection Summary

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 50 (50%), Referenced to phase 2-WBTL and 6-EBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
23: Library Ln & Seminary Rd

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT  | NBR   | SBL   | SBT  | SBR   |
|---------------------|-------|-------|------|-------|-------|------|-------|------|-------|-------|------|-------|
| Lane Configurations |       |       |      |       |       |      |       |      |       |       |      |       |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12   | 12    |
| Grade (%)           |       | 0%    |      |       | 0%    |      |       | 0%   |       |       | 0%   |       |
| Storage Length (ft) | 150   |       | 0    | 100   |       | 0    | 150   |      | 150   | 150   |      | 150   |
| Storage Lanes       | 1     |       | 0    | 1     |       | 0    | 1     |      | 1     | 1     |      | 1     |
| Taper Length (ft)   | 50    |       |      | 50    |       |      | 50    |      | 50    | 50    |      | 50    |
| Lane Util. Factor   | 1.00  | 0.91  | 0.91 | 1.00  | 0.91  | 0.91 | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  |
| Ped Bike Factor     | 1.00  | 1.00  |      | 0.99  | 1.00  |      | 0.81  |      | 0.96  | 0.99  |      | 0.92  |
| Frnt                |       | 0.998 |      |       | 0.992 |      |       |      | 0.850 |       |      | 0.850 |
| Flt Protected       | 0.950 |       |      | 0.950 |       |      | 0.950 |      |       | 0.950 |      |       |
| Satd. Flow (prot)   | 1770  | 5068  | 0    | 1770  | 5039  | 0    | 1770  | 1863 | 1583  | 1770  | 1863 | 1583  |
| Flt Permitted       | 0.201 |       |      | 0.142 |       |      |       |      |       | 0.625 |      |       |
| Satd. Flow (perm)   | 374   | 5068  | 0    | 262   | 5039  | 0    | 1513  | 1863 | 1524  | 1154  | 1863 | 1455  |
| Right Turn on Red   |       |       | Yes  |       |       | Yes  |       |      | Yes   |       |      | Yes   |
| Satd. Flow (RTOR)   |       | 2     |      | 6     |       |      |       |      | 5     |       |      | 387   |
| Link Speed (mph)    |       | 35    |      | 35    |       |      |       |      | 35    |       |      | 25    |
| Link Distance (ft)  |       | 277   |      | 464   |       |      |       |      | 777   |       |      | 520   |
| Travel Time (s)     |       | 5.4   |      | 9.0   |       |      |       |      | 15.1  |       |      | 14.2  |

Intersection Summary

Area Type: Other

Timings  
23: Library Ln & Seminary Rd

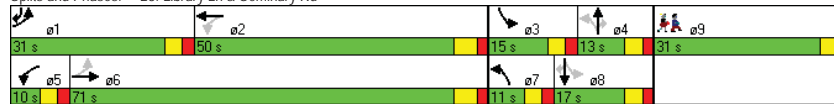
2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT  | NBR  | SBL   | SBT   | SBR   | ø9   |
|----------------------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔    | ↔    | ↔     | ↔     | ↔     | ↔    |
| Volume (vph)         | 230   | 1490  | 35    | 1000  | 50    | 5    | 5    | 90    | 15    | 360   |      |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | pm+pt | NA   | Perm | pm+pt | NA    | pm+ov |      |
| Protected Phases     | 1     | 6     | 5     | 2     | 7     | 4    |      | 3     | 8     | 1     | 9    |
| Permitted Phases     | 6     |       | 2     |       | 4     |      | 4    | 8     |       | 8     |      |
| Detector Phase       | 1     | 6     | 5     | 2     | 7     | 4    | 4    | 3     | 8     | 1     |      |
| Switch Phase         |       |       |       |       |       |      |      |       |       |       |      |
| Minimum Initial (s)  | 7.0   | 30.0  | 4.0   | 30.0  | 4.0   | 8.0  | 8.0  | 4.0   | 8.0   | 7.0   | 4.0  |
| Minimum Split (s)    | 12.0  | 36.5  | 9.0   | 36.5  | 9.0   | 13.0 | 13.0 | 9.0   | 13.0  | 12.0  | 31.0 |
| Total Split (s)      | 31.0  | 71.0  | 10.0  | 50.0  | 11.0  | 13.0 | 15.0 | 17.0  | 31.0  | 31.0  |      |
| Total Split (%)      | 22.1% | 50.7% | 7.1%  | 35.7% | 7.9%  | 9.3% | 9.3% | 10.7% | 12.1% | 22.1% | 22%  |
| Yellow Time (s)      | 3.0   | 4.0   | 3.0   | 4.0   | 3.0   | 3.0  | 3.0  | 3.0   | 3.0   | 3.0   | 3.0  |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0  | 2.0  | 2.0   | 2.0   | 2.0   | 0.0  |
| 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)  | 5.0   | 6.0   | 5.0   | 6.0   | 5.0   | 5.0  | 5.0  | 5.0   | 5.0   | 5.0   |      |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lead  | Lag  | Lag  | Lead  | Lag   | Lead  |      |
| Lead-Lag Optimize?   |       |       |       |       |       |      |      |       |       |       |      |
| Recall Mode          | None  | C-Max | None  | C-Max | None  | None | None | None  | None  | None  | None |
| Act Effct Green (s)  | 115.2 | 105.2 | 98.4  | 91.3  | 10.8  | 8.0  | 8.0  | 14.4  | 9.6   | 24.3  |      |
| Actuated g/C Ratio   | 0.82  | 0.75  | 0.70  | 0.65  | 0.08  | 0.06 | 0.06 | 0.10  | 0.07  | 0.17  |      |
| v/c Ratio            | 0.51  | 0.43  | 0.15  | 0.34  | 0.42  | 0.05 | 0.05 | 0.60  | 0.12  | 0.66  |      |
| Control Delay        | 7.5   | 7.7   | 10.3  | 23.0  | 65.4  | 63.6 | 37.8 | 73.2  | 62.3  | 9.3   |      |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.3   | 0.0   | 0.0  | 0.0  | 0.0   | 0.0   | 0.0   |      |
| Total Delay          | 7.5   | 7.7   | 10.3  | 23.3  | 65.4  | 63.6 | 37.8 | 73.2  | 62.3  | 9.3   |      |
| LOS                  | A     | A     | B     | C     | E     | E    | D    | E     | E     | A     |      |
| Approach Delay       |       | 7.6   |       | 22.9  |       | 63.1 |      |       | 23.4  |       |      |
| Approach LOS         |       | A     |       | C     |       | E    |      |       | C     |       |      |

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 47 (34%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Natural Cycle: 105  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.66  
 Intersection Signal Delay: 15.8  
 Intersection LOS: B  
 Intersection Capacity Utilization 68.6%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 23: Library Ln & Seminary Rd



Phasings  
23: Library Ln & Seminary Rd

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBL   | EBT   | WBL  | WBT   | NBL  | NBT  | NBR  | SBL   | SBT   | SBR   | ø9   |
|-------------------------|-------|-------|------|-------|------|------|------|-------|-------|-------|------|
| Protected Phases        | 1     | 6     | 5    | 2     | 7    | 4    |      | 3     | 8     | 1     | 9    |
| Permitted Phases        | 6     |       | 2    |       | 4    |      | 4    | 8     |       | 8     |      |
| Minimum Initial (s)     | 7.0   | 30.0  | 4.0  | 30.0  | 4.0  | 8.0  | 8.0  | 4.0   | 8.0   | 7.0   | 4.0  |
| Minimum Split (s)       | 12.0  | 36.5  | 9.0  | 36.5  | 9.0  | 13.0 | 13.0 | 9.0   | 13.0  | 12.0  | 31.0 |
| Total Split (s)         | 31.0  | 71.0  | 10.0 | 50.0  | 11.0 | 13.0 | 15.0 | 17.0  | 31.0  | 31.0  |      |
| Total Split (%)         | 22.1% | 50.7% | 7.1% | 35.7% | 7.9% | 9.3% | 9.3% | 10.7% | 12.1% | 22.1% | 22%  |
| Maximum Green (s)       | 26.0  | 65.0  | 5.0  | 44.0  | 6.0  | 8.0  | 8.0  | 10.0  | 12.0  | 26.0  | 28.0 |
| Yellow Time (s)         | 3.0   | 4.0   | 3.0  | 4.0   | 3.0  | 3.0  | 3.0  | 3.0   | 3.0   | 3.0   | 3.0  |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0  | 2.0   | 2.0  | 2.0  | 2.0  | 2.0   | 2.0   | 2.0   | 0.0  |
| Lead/Lag                | Lead  | Lag   | Lead | Lag   | Lead | Lag  | Lag  | Lead  | Lag   | Lead  |      |
| Lead-Lag Optimize?      |       |       |      |       |      |      |      |       |       |       |      |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0  | 3.0  | 3.0  | 3.0   | 3.0   | 3.0   | 3.0  |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0  | 3.0   | 3.0  | 3.0  | 3.0  | 3.0   | 3.0   | 3.0   | 3.0  |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0  |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0  |
| Recall Mode             | None  | C-Max | None | C-Max | None | None | None | None  | None  | None  | None |
| Walk Time (s)           |       |       |      |       |      |      |      |       |       |       | 4.0  |
| Flash Dont Walk (s)     |       |       |      |       |      |      |      |       |       |       | 24.0 |
| Pedestrian Calls (#/hr) |       |       |      |       |      |      |      |       |       |       | 0    |
| 90th %ile Green (s)     | 26.0  | 94.0  | 7.0  | 75.0  | 6.0  | 8.0  | 8.0  | 10.0  | 12.0  | 26.0  | 0.0  |
| 90th %ile Term Code     | Max   | Coord | Gap  | Coord | Max  | Max  | Max  | Max   | Hold  | Max   | Skip |
| 70th %ile Green (s)     | 21.7  | 94.5  | 6.5  | 79.3  | 6.0  | 8.0  | 8.0  | 10.0  | 12.0  | 21.7  | 0.0  |
| 70th %ile Term Code     | Gap   | Coord | Gap  | Coord | Max  | Max  | Max  | Max   | Hold  | Gap   | Skip |
| 50th %ile Green (s)     | 17.6  | 108.1 | 5.9  | 96.4  | 10.0 | 0.0  | 0.0  | 10.0  | 0.0   | 17.6  | 0.0  |
| 50th %ile Term Code     | Gap   | Coord | Gap  | Coord | Hold | Skip | Skip | Max   | Skip  | Gap   | Skip |
| 30th %ile Green (s)     | 14.4  | 108.3 | 5.7  | 99.6  | 10.0 | 0.0  | 0.0  | 10.0  | 0.0   | 14.4  | 0.0  |
| 30th %ile Term Code     | Gap   | Coord | Gap  | Coord | Hold | Skip | Skip | Max   | Skip  | Gap   | Skip |
| 10th %ile Green (s)     | 9.7   | 121.0 | 0.0  | 106.3 | 0.0  | 0.0  | 0.0  | 8.0   | 8.0   | 9.7   | 0.0  |
| 10th %ile Term Code     | Gap   | Coord | Skip | Coord | Skip | Skip | Skip | Gap   | Hold  | Gap   | Skip |

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 47 (34%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow  
 Control Type: Actuated-Coordinated



Lanes and Geometrics  
 33: Seminary Rd (S)/Seminary Rd (N) & Seminary Rd  
 2020 Market with Traffic Mitigation  
 PM PEAK

| Lane Group          | EBL  | EBT  | EBR  | WBL  | WBT   | WBR   | NBL  | NBT  | NBR   | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|-------|-------|------|------|-------|------|------|------|
| Lane Configurations |      | ↑    |      |      | ↑↑    | ↑↑    |      |      | ↑↑    |      |      |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12   | 12   | 12    | 12    | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           |      | 0%   |      |      | 0%    |       |      | 0%   |       |      | 0%   |      |
| Storage Length (ft) | 0    |      | 0    | 0    |       | 0     | 0    |      | 0     | 0    |      | 0    |
| Storage Lanes       | 0    |      | 0    | 0    |       | 1     | 0    |      | 2     | 0    |      | 0    |
| Taper Length (ft)   | 50   |      |      | 50   |       |       | 50   |      |       | 50   |      |      |
| Lane Util. Factor   | 1.00 | 1.00 | 1.00 | 1.00 | 0.91  | 0.91  | 1.00 | 1.00 | 0.88  | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      |      |      | 0.984 | 0.850 |      |      | 0.850 |      |      |      |
| Frt                 |      |      |      |      |       |       |      |      |       |      |      |      |
| Flt Protected       |      |      |      |      |       |       |      |      |       |      |      |      |
| Satd. Flow (prot)   | 0    | 1863 | 0    | 0    | 3336  | 1441  | 0    | 0    | 2787  | 0    | 0    | 0    |
| Flt Permitted       |      |      |      |      |       |       |      |      |       |      |      |      |
| Satd. Flow (perm)   | 0    | 1863 | 0    | 0    | 3336  | 1441  | 0    | 0    | 2787  | 0    | 0    | 0    |
| Link Speed (mph)    |      | 35   |      |      | 35    |       |      |      | 35    |      |      | 30   |
| Link Distance (ft)  |      | 269  |      |      | 195   |       |      |      | 278   |      |      | 199  |
| Travel Time (s)     |      | 5.2  |      |      | 3.8   |       |      |      | 5.4   |      |      | 4.5  |

**Intersection Summary**  
 Area Type: Other

Lanes and Geometrics  
 41: Van Dorn St & Kenmore Ave S  
 2020 Market with Traffic Mitigation  
 PM PEAK

| Lane Group          | WBL   | WBR   | NBT   | NBR  | SBL  | SBT   |
|---------------------|-------|-------|-------|------|------|-------|
| Lane Configurations | ↑     | ↑     | ↑↑    |      |      | ↑↑    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900  | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12    | 12   | 12   | 12    |
| Grade (%)           | 0%    |       | 0%    |      |      | 0%    |
| Storage Length (ft) | 0     | 50    |       | 0    | 0    |       |
| Storage Lanes       | 1     | 1     |       | 0    | 0    |       |
| Taper Length (ft)   | 50    |       |       |      | 50   |       |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95  | 0.95 | 0.95 | 0.95  |
| Ped Bike Factor     |       | 0.99  | 1.00  |      |      |       |
| Frt                 |       | 0.850 | 0.979 |      |      |       |
| Flt Protected       | 0.950 |       |       |      |      | 0.999 |
| Satd. Flow (prot)   | 1770  | 1583  | 3450  | 0    | 0    | 3536  |
| Flt Permitted       | 0.950 |       |       |      |      | 0.921 |
| Satd. Flow (perm)   | 1770  | 1563  | 3450  | 0    | 0    | 3260  |
| Right Turn on Red   |       | Yes   |       | Yes  |      |       |
| Satd. Flow (RTOR)   |       | 26    | 39    |      |      |       |
| Link Speed (mph)    | 30    |       | 35    |      |      | 35    |
| Link Distance (ft)  | 908   |       | 2895  |      |      | 1898  |
| Travel Time (s)     | 20.6  |       | 56.4  |      |      | 37.0  |

**Intersection Summary**  
 Area Type: Other

**Timings**  
**41: Van Dorn St & Kenmore Ave S**

2020 Market with Traffic Mitigation  
 PM PEAK

| Lane Group           | WBL   | WBR   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖ ↗   | ↖ ↗   | ↕     | ↖ ↗   | ↖ ↗   |
| Volume (vph)         | 360   | 50    | 520   | 40    | 1555  |
| Turn Type            | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 2     |       | 1     |       | 1     |
| Permitted Phases     |       | 2     |       | 1     |       |
| Detector Phase       | 2     | 2     | 1     | 1     | 1     |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)    | 27.5  | 27.5  | 29.0  | 29.0  | 29.0  |
| Total Split (s)      | 27.6  | 27.6  | 52.4  | 52.4  | 52.4  |
| Total Split (%)      | 34.5% | 34.5% | 65.5% | 65.5% | 65.5% |
| Yellow Time (s)      | 3.5   | 3.5   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.5   | 5.5   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             | Lag   | Lag   | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?   |       |       |       |       |       |
| Recall Mode          | None  | None  | Ped   | Ped   | Ped   |
| Act Effct Green (s)  | 19.8  | 19.8  | 40.2  |       | 40.2  |
| Actuated g/C Ratio   | 0.28  | 0.28  | 0.56  |       | 0.56  |
| v/c Ratio            | 0.79  | 0.12  | 0.33  |       | 0.94  |
| Control Delay        | 39.4  | 14.2  | 8.5   |       | 26.5  |
| Queue Delay          | 0.0   | 0.0   | 0.0   |       | 0.0   |
| Total Delay          | 39.4  | 14.2  | 8.5   |       | 26.5  |
| LOS                  | D     | B     | A     |       | C     |
| Approach Delay       | 36.3  |       | 8.5   |       | 26.5  |
| Approach LOS         | D     |       | A     |       | C     |

| Intersection Summary               |                        |
|------------------------------------|------------------------|
| Cycle Length:                      | 80                     |
| Actuated Cycle Length:             | 71.8                   |
| Natural Cycle:                     | 75                     |
| Control Type:                      | Actuated-Uncoordinated |
| Maximum v/c Ratio:                 | 0.94                   |
| Intersection Signal Delay:         | 23.9                   |
| Intersection LOS:                  | C                      |
| Intersection Capacity Utilization: | 97.8%                  |
| ICU Level of Service:              | F                      |
| Analysis Period (min):             | 15                     |



**Phasings**  
**41: Van Dorn St & Kenmore Ave S**

2020 Market with Traffic Mitigation  
 PM PEAK

| Lane Group              | WBL   | WBR   | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|
| Protected Phases        | 2     |       | 1     |       | 1     |
| Permitted Phases        |       | 2     |       | 1     |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 27.5  | 27.5  | 29.0  | 29.0  | 29.0  |
| Total Split (s)         | 27.6  | 27.6  | 52.4  | 52.4  | 52.4  |
| Total Split (%)         | 34.5% | 34.5% | 65.5% | 65.5% | 65.5% |
| Maximum Green (s)       | 22.1  | 22.1  | 46.4  | 46.4  | 46.4  |
| Yellow Time (s)         | 3.5   | 3.5   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lag   | Lag   | Lead  | Lead  | Lead  |
| Lead-Lag Optimize?      |       |       |       |       |       |
| Vehicle Extension (s)   | 4.0   | 4.0   | 0.2   | 0.2   | 0.2   |
| Minimum Gap (s)         | 4.0   | 4.0   | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | Ped   | Ped   | Ped   |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     | 15.0  | 15.0  | 16.0  | 16.0  | 16.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     |
| 90th %ile Green (s)     | 22.1  | 22.1  | 46.4  | 46.4  | 46.4  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |
| 70th %ile Green (s)     | 22.1  | 22.1  | 46.4  | 46.4  | 46.4  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   |
| 50th %ile Green (s)     | 22.1  | 22.1  | 45.7  | 45.7  | 45.7  |
| 50th %ile Term Code     | Max   | Max   | Gap   | Gap   | Gap   |
| 30th %ile Green (s)     | 19.1  | 19.1  | 37.6  | 37.6  | 37.6  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |
| 10th %ile Green (s)     | 13.7  | 13.7  | 26.4  | 26.4  | 26.4  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   |

| Intersection Summary      |                        |
|---------------------------|------------------------|
| Cycle Length:             | 80                     |
| Actuated Cycle Length:    | 71.8                   |
| Control Type:             | Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: | 80                     |
| 70th %ile Actuated Cycle: | 80                     |
| 50th %ile Actuated Cycle: | 79.3                   |
| 30th %ile Actuated Cycle: | 68.2                   |
| 10th %ile Actuated Cycle: | 51.6                   |

Lanes and Geometrics 2020 Market with Traffic Mitigation  
PM PEAK  
42: Van Dorn St & Sanger Ave/Richenbacher Ave

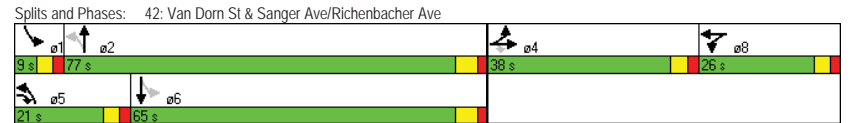
| Lane Group          | EBL   | EBT  | EBR   | WBL  | WBT   | WBR  | NBL   | NBT  | NBR   | SBL  | SBT  | SBR  |
|---------------------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|
| Lane Configurations |       | ↔    | ↔     | ↔    | ↔     |      | ↔     | ↔    | ↔     | ↔    | ↔    | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12   | 12    | 12   | 12    | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           | 0%    |      | 0%    |      | 0%    |      | 0%    |      | 0%    |      | 0%   |      |
| Storage Length (ft) | 150   |      | 0     | 0    |       | 150  | 390   |      | 0     | 140  |      | 0    |
| Storage Lanes       | 0     |      | 1     | 1    |       | 1    | 1     |      | 0     | 1    |      | 0    |
| Taper Length (ft)   | 50    |      |       | 50   |       |      | 50    |      |       | 50   |      |      |
| Lane Util. Factor   | 1.00  | 0.95 | 0.95  | 1.00 | 1.00  | 1.00 | 1.00  | 0.95 | 0.95  | 1.00 | 0.95 | 0.95 |
| Ped Bike Factor     | 0.98  |      | 0.96  |      | 0.99  |      | 1.00  |      | 1.00  |      | 1.00 |      |
| Frt                 | 0.917 |      | 0.850 |      | 0.951 |      | 0.993 |      | 0.991 |      |      |      |
| Flt Protected       | 0.989 |      | 0.950 |      |       |      | 0.950 |      | 0.950 |      |      |      |
| Satd. Flow (prot)   | 0     | 1566 | 1770  | 1770 | 1749  | 0    | 1770  | 3508 | 0     | 1770 | 3504 | 0    |
| Flt Permitted       | 0.989 |      | 0.950 |      |       |      | 0.061 |      | 0.433 |      |      |      |
| Satd. Flow (perm)   | 0     | 1566 | 1439  | 1770 | 1749  | 0    | 114   | 3508 | 0     | 807  | 3504 | 0    |
| Right Turn on Red   |       |      | No    |      | Yes   |      |       |      | Yes   |      | Yes  |      |
| Satd. Flow (RTOR)   |       |      |       |      | 14    |      | 4     |      | 5     |      |      |      |
| Link Speed (mph)    | 25    |      | 25    |      | 35    |      | 35    |      | 35    |      |      |      |
| Link Distance (ft)  | 517   |      | 1172  |      | 801   |      | 2895  |      |       |      |      |      |
| Travel Time (s)     | 14.1  |      | 32.0  |      | 15.6  |      | 56.4  |      |       |      |      |      |

**Intersection Summary**  
Area Type: Other

Timings 2020 Market with Traffic Mitigation  
PM PEAK  
42: Van Dorn St & Sanger Ave/Richenbacher Ave

| Lane Group           | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 85    | 550   | 20    | 60    | 265   | 515   | 40    | 1345  |
| Turn Type            | NA    | pm+ov | Split | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 4     | 5     | 8     | 8     | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 2     |       | 6     |       |       |       |
| Detector Phase       | 4     | 5     | 8     | 8     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 26.0  | 9.0   | 26.0  | 26.0  | 9.0   | 27.0  | 9.0   | 27.0  |
| Total Split (s)      | 38.0  | 21.0  | 26.0  | 26.0  | 21.0  | 77.0  | 9.0   | 65.0  |
| Total Split (%)      | 25.3% | 14.0% | 17.3% | 17.3% | 14.0% | 51.3% | 6.0%  | 43.3% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             | Lead  |       | Lead  |       | Lag   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | Max   | None  | Max   |
| Act Effct Green (s)  | 33.1  | 49.1  | 14.1  | 14.1  | 81.1  | 73.0  | 64.1  | 59.1  |
| Actuated g/C Ratio   | 0.23  | 0.34  | 0.10  | 0.10  | 0.57  | 0.51  | 0.45  | 0.41  |
| v/c Ratio            | 1.10  | 0.74  | 0.13  | 0.52  | 1.14  | 0.32  | 0.11  | 1.07  |
| Control Delay        | 126.0 | 36.6  | 59.2  | 62.1  | 139.2 | 22.2  | 17.0  | 83.6  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 126.0 | 36.6  | 59.2  | 62.1  | 139.2 | 22.2  | 17.0  | 83.6  |
| LOS                  | F     | D     | E     | E     | F     | C     | B     | F     |
| Approach Delay       | 82.7  |       | 61.5  |       | 60.7  |       | 81.8  |       |
| Approach LOS         | F     |       | E     |       | E     |       | F     |       |

**Intersection Summary**  
Cycle Length: 150  
Actuated Cycle Length: 143.3  
Natural Cycle Length: 150  
Control Type: Semi Act-Uncoord  
Maximum v/c Ratio: 1.14  
Intersection Signal Delay: 75.8 Intersection LOS: E  
Intersection Capacity Utilization 95.7% ICU Level of Service F  
Analysis Period (min) 15



Phasings

42: Van Dorn St & Sanger Ave/Richenbacher Ave

2020 Market with Traffic Mitigation

PM PEAK

|                         | →     | ↘     | ↙     | ←     | ↖     | ↗     | ↘    | ↓     |
|-------------------------|-------|-------|-------|-------|-------|-------|------|-------|
| Lane Group              | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL  | SBT   |
| Protected Phases        | 4     | 5     | 8     | 8     | 5     | 2     | 1    | 6     |
| Permitted Phases        | 4     |       |       |       |       |       |      |       |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 10.0  | 4.0  | 10.0  |
| Minimum Split (s)       | 26.0  | 9.0   | 26.0  | 26.0  | 9.0   | 27.0  | 9.0  | 27.0  |
| Total Split (s)         | 38.0  | 21.0  | 26.0  | 26.0  | 21.0  | 77.0  | 9.0  | 65.0  |
| Total Split (%)         | 25.3% | 14.0% | 17.3% | 17.3% | 14.0% | 51.3% | 6.0% | 43.3% |
| Maximum Green (s)       | 33.0  | 16.0  | 21.0  | 21.0  | 16.0  | 71.0  | 4.0  | 59.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0  | 2.0   |
| Lead/Lag                | Lead  |       |       |       | Lead  |       | Lag  |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |      |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 0.2   | 3.0  | 0.2   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 0.2   | 3.0  | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | Max   | None | Max   |
| Walk Time (s)           | 7.0   |       | 7.0   | 7.0   |       | 7.0   |      | 7.0   |
| Flash Dont Walk (s)     | 14.0  |       | 14.0  | 14.0  |       | 14.0  |      | 14.0  |
| Pedestrian Calls (#/hr) | 10    |       | 10    | 10    |       | 10    |      | 10    |
| 90th %ile Green (s)     | 33.0  | 16.0  | 21.0  | 21.0  | 16.0  | 71.0  | 4.0  | 59.0  |
| 90th %ile Term Code     | Max   | Max   | Ped   | Ped   | Max   | MaxR  | Max  | MaxR  |
| 70th %ile Green (s)     | 33.0  | 16.0  | 21.0  | 21.0  | 16.0  | 71.0  | 4.0  | 59.0  |
| 70th %ile Term Code     | Max   | Max   | Ped   | Ped   | Max   | MaxR  | Max  | MaxR  |
| 50th %ile Green (s)     | 33.0  | 16.0  | 12.2  | 12.2  | 16.0  | 71.0  | 4.0  | 59.0  |
| 50th %ile Term Code     | Max   | Max   | Gap   | Gap   | Max   | MaxR  | Max  | MaxR  |
| 30th %ile Green (s)     | 33.0  | 16.0  | 10.1  | 10.1  | 16.0  | 71.0  | 4.0  | 59.0  |
| 30th %ile Term Code     | Max   | Max   | Gap   | Gap   | Max   | MaxR  | Max  | MaxR  |
| 10th %ile Green (s)     | 33.0  | 16.0  | 7.2   | 7.2   | 16.0  | 80.0  | 0.0  | 59.0  |
| 10th %ile Term Code     | Max   | Max   | Gap   | Gap   | Max   | Hold  | Skip | MaxR  |

Intersection Summary

|                                 |
|---------------------------------|
| Cycle Length: 150               |
| Actuated Cycle Length: 143.3    |
| Control Type: Semi Act-Uncoord  |
| 90th %ile Actuated Cycle: 150   |
| 70th %ile Actuated Cycle: 150   |
| 50th %ile Actuated Cycle: 141.2 |
| 30th %ile Actuated Cycle: 139.1 |
| 10th %ile Actuated Cycle: 136.2 |

Lanes and Geometrics

43: Van Dorn St/ Van Dorn St & Braddock Rd

2020 Market with Traffic Mitigation

PM PEAK

|                     | ↖     | →    | ↘     | ↙     | ←     | ↖    | ↗     | ↘    | ↙    | ↓     | ↘    |      |
|---------------------|-------|------|-------|-------|-------|------|-------|------|------|-------|------|------|
| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT  | NBR  | SBL   | SBT  | SBR  |
| Lane Configurations | ↖     | ↖↗   |       | ↖     | ↖↗    |      | ↖     | ↖↗   |      | ↖     | ↖↗   |      |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12   | 12   | 12    | 12   | 12   |
| Grade (%)           | 0%    |      | 0%    |       | 0%    |      | 0%    |      | 0%   |       | 0%   |      |
| Storage Length (ft) | 40    |      | 0     | 140   |       | 0    | 150   |      | 0    | 100   |      | 0    |
| Storage Lanes       | 1     |      | 0     | 1     |       | 0    | 1     |      | 0    | 1     |      | 0    |
| Taper Length (ft)   | 50    |      |       | 50    |       |      | 50    |      |      | 50    |      |      |
| Lane Util. Factor   | 1.00  | 0.95 | 0.95  | 1.00  | 0.95  | 0.95 | 1.00  | 0.95 | 0.95 | 1.00  | 0.95 | 0.95 |
| Ped Bike Factor     | 0.99  |      | 1.00  |       | 0.99  |      | 0.99  |      | 1.00 |       | 1.00 |      |
| Frt                 | 0.888 |      | 0.990 |       | 0.911 |      | 0.995 |      |      |       |      |      |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      | 0.950 |      |      | 0.950 |      |      |
| Satd. Flow (prot)   | 1770  | 3096 | 0     | 1770  | 3499  | 0    | 1770  | 3193 | 0    | 1770  | 3520 | 0    |
| Flt Permitted       | 0.601 |      |       | 0.145 |       |      | 0.115 |      |      | 0.560 |      |      |
| Satd. Flow (perm)   | 1120  | 3096 | 0     | 270   | 3499  | 0    | 214   | 3193 | 0    | 1043  | 3520 | 0    |
| Right Turn on Red   |       |      | Yes   |       |       |      | Yes   |      |      |       | Yes  |      |
| Satd. Flow (RTOR)   | 205   |      | 8     |       | 188   |      | 3     |      |      |       |      |      |
| Link Speed (mph)    | 35    |      | 35    |       | 35    |      | 35    |      |      |       |      |      |
| Link Distance (ft)  | 1126  |      | 1277  |       | 652   |      | 1512  |      |      |       |      |      |
| Travel Time (s)     | 21.9  |      | 24.9  |       | 12.7  |      | 29.5  |      |      |       |      |      |

Intersection Summary

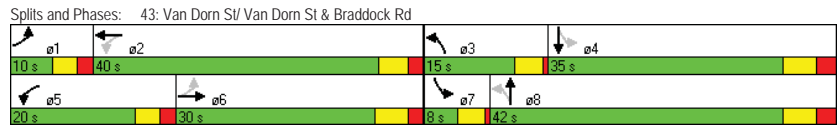
|            |       |
|------------|-------|
| Area Type: | Other |
|------------|-------|

Timings 2020 Market with Traffic Mitigation  
 43: Van Dorn St/ Van Dorn St & Braddock Rd PM PEAK

| Lane Group           | EBL   | EBT    | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|--------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↗      | ↖     | ↗     | ↖     | ↗     | ↖     | ↗     |
| Volume (vph)         | 10    | 155    | 290   | 210   | 230   | 120   | 15    | 855   |
| Turn Type            | pm+pt | NA     | pm+pt | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 1     | 6      | 5     | 2     | 3     | 8     | 7     | 4     |
| Permitted Phases     | 6     |        | 2     |       | 8     |       | 4     |       |
| Detector Phase       | 1     | 6      | 5     | 2     | 3     | 8     | 7     | 4     |
| Switch Phase         |       |        |       |       |       |       |       |       |
| Minimum Initial (s)  | 5.0   | 10.0   | 5.0   | 10.0  | 4.0   | 7.0   | 4.0   | 7.0   |
| Minimum Split (s)    | 10.0  | 29.0   | 10.0  | 28.5  | 8.0   | 34.5  | 8.0   | 34.5  |
| Total Split (s)      | 10.0  | 30.0   | 20.0  | 40.0  | 15.0  | 42.0  | 8.0   | 35.0  |
| Total Split (%)      | 10.0% | 30.0%  | 20.0% | 40.0% | 15.0% | 42.0% | 8.0%  | 35.0% |
| Yellow Time (s)      | 3.0   | 4.0    | 3.0   | 3.5   | 3.5   | 4.0   | 3.5   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.0    | 2.0   | 2.0   | 0.5   | 2.5   | 0.5   | 2.5   |
| Lost Time Adjust (s) | 0.0   | 0.0    | 0.0   | 0.0   | 0.0   | -5.0  | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.0   | 6.0    | 5.0   | 5.5   | 4.0   | 1.5   | 4.0   | 6.5   |
| Lead/Lag             | Lead  | Lag    | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |        |       |       |       |       |       |       |
| Recall Mode          | None  | Min    | None  | C-Max | None  | Min   | None  | Min   |
| Act Effct Green (s)  | 30.5  | 24.5   | 45.2  | 42.7  | 45.8  | 45.1  | 34.8  | 28.3  |
| Actuated g/C Ratio   | 0.30  | 0.24   | 0.45  | 0.43  | 0.46  | 0.45  | 0.35  | 0.28  |
| v/c Ratio            | 0.03  | 0.93dr | 0.91  | 0.16  | 0.91  | 0.21  | 0.04  | 0.95  |
| Control Delay        | 8.5   | 18.4   | 54.8  | 18.2  | 61.5  | 7.5   | 15.7  | 54.9  |
| Queue Delay          | 0.0   | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 8.5   | 18.4   | 54.8  | 18.2  | 61.5  | 7.5   | 15.7  | 54.9  |
| LOS                  | A     | B      | D     | B     | E     | A     | B     | D     |
| Approach Delay       |       | 18.3   |       | 38.8  |       | 31.2  |       | 54.2  |
| Approach LOS         |       | B      |       | D     |       | C     |       | D     |

**Intersection Summary**

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 46 (46%), Referenced to phase 2:WBTL, Start of Green  
 Natural Cycle: 85  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.95  
 Intersection Signal Delay: 37.6  
 Intersection LOS: D  
 Intersection Capacity Utilization 91.1%  
 ICU Level of Service F  
 Analysis Period (min) 15  
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.



Phasings 2020 Market with Traffic Mitigation  
 43: Van Dorn St/ Van Dorn St & Braddock Rd PM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL  | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|------|-------|
| Protected Phases        | 1     | 6     | 5     | 2     | 3     | 8     | 7    | 4     |
| Permitted Phases        | 6     |       | 2     |       | 8     |       | 4    |       |
| Minimum Initial (s)     | 5.0   | 10.0  | 5.0   | 10.0  | 4.0   | 7.0   | 4.0  | 7.0   |
| Minimum Split (s)       | 10.0  | 29.0  | 10.0  | 28.5  | 8.0   | 34.5  | 8.0  | 34.5  |
| Total Split (s)         | 10.0  | 30.0  | 20.0  | 40.0  | 15.0  | 42.0  | 8.0  | 35.0  |
| Total Split (%)         | 10.0% | 30.0% | 20.0% | 40.0% | 15.0% | 42.0% | 8.0% | 35.0% |
| Maximum Green (s)       | 5.0   | 24.0  | 15.0  | 34.5  | 11.0  | 35.5  | 4.0  | 28.5  |
| Yellow Time (s)         | 3.0   | 4.0   | 3.0   | 3.5   | 3.5   | 4.0   | 3.5  | 4.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 0.5   | 2.5   | 0.5  | 2.5   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   | Lead  | Lag   | Lead | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |      |       |
| Vehicle Extension (s)   | 3.0   | 0.2   | 3.0   | 0.2   | 3.0   | 2.0   | 3.0  | 2.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 3.0   | 0.2   | 3.0  | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None  | Min   | None  | C-Max | None  | Min   | None | Min   |
| Walk Time (s)           |       | 7.0   |       | 7.0   |       | 7.0   |      | 7.0   |
| Flash Dont Walk (s)     |       | 16.0  |       | 16.0  |       | 21.0  |      | 21.0  |
| Pedestrian Calls (#/hr) |       | 0     |       | 0     |       | 0     |      | 0     |
| 90th %ile Green (s)     | 5.0   | 24.0  | 15.0  | 34.5  | 11.0  | 35.5  | 4.0  | 28.5  |
| 90th %ile Term Code     | Max   | Coord | Max   | Coord | Max   | Hold  | Max  | Max   |
| 70th %ile Green (s)     | 0.0   | 24.0  | 15.0  | 44.5  | 11.0  | 35.5  | 4.0  | 28.5  |
| 70th %ile Term Code     | Skip  | Coord | Max   | Coord | Max   | Hold  | Max  | Max   |
| 50th %ile Green (s)     | 0.0   | 24.0  | 15.0  | 44.5  | 11.0  | 43.5  | 0.0  | 28.5  |
| 50th %ile Term Code     | Skip  | Coord | Max   | Coord | Max   | Hold  | Skip | Max   |
| 30th %ile Green (s)     | 0.0   | 24.0  | 15.0  | 44.5  | 11.0  | 43.5  | 0.0  | 28.5  |
| 30th %ile Term Code     | Skip  | Coord | Max   | Coord | Max   | Hold  | Skip | Max   |
| 10th %ile Green (s)     | 0.0   | 26.3  | 13.6  | 45.4  | 11.0  | 42.6  | 0.0  | 27.6  |
| 10th %ile Term Code     | Skip  | Coord | Gap   | Coord | Max   | Hold  | Skip | Gap   |

**Intersection Summary**

Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 46 (46%), Referenced to phase 2:WBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

2020 Market with Traffic Mitigation

47: Van Dorn St/Van Dorn St & Taney Ave

PM PEAK

|                     | ↖     | ↗     | ↑     | ↘    | ↙     | ↓    |
|---------------------|-------|-------|-------|------|-------|------|
| Lane Group          | WBL   | WBR   | NBT   | NBR  | SBL   | SBT  |
| Lane Configurations | ↖     | ↗     | ↑↑    |      | ↘     | ↙    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |       | 0%    |      |       | 0%   |
| Storage Length (ft) | 0     | 85    |       | 0    | 180   |      |
| Storage Lanes       | 1     | 1     |       | 0    | 1     |      |
| Taper Length (ft)   | 50    |       |       |      | 50    |      |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95  | 0.95 | 1.00  | 0.95 |
| Ped Bike Factor     |       | 0.99  | 0.99  |      |       |      |
| Frt                 |       | 0.850 | 0.976 |      |       |      |
| Flt Protected       | 0.950 |       |       |      | 0.950 |      |
| Satd. Flow (prot)   | 1770  | 1583  | 3433  | 0    | 1770  | 3539 |
| Flt Permitted       | 0.950 |       |       |      | 0.950 |      |
| Satd. Flow (perm)   | 1770  | 1562  | 3433  | 0    | 1770  | 3539 |
| Right Turn on Red   |       | Yes   |       | Yes  |       |      |
| Satd. Flow (RTOR)   |       | 59    | 41    |      |       |      |
| Link Speed (mph)    | 25    |       | 35    |      |       | 35   |
| Link Distance (ft)  | 1013  |       | 910   |      |       | 801  |
| Travel Time (s)     | 27.6  |       | 17.7  |      |       | 15.6 |

Intersection Summary

Area Type: Other

Timings

2020 Market with Traffic Mitigation

47: Van Dorn St/Van Dorn St & Taney Ave

PM PEAK

|                      | ↖     | ↗     | ↑     | ↘     | ↙     |
|----------------------|-------|-------|-------|-------|-------|
| Lane Group           | WBL   | WBR   | NBT   | SBL   | SBT   |
| Lane Configurations  | ↖     | ↗     | ↑↑    | ↘     | ↙     |
| Volume (vph)         | 150   | 55    | 750   | 100   | 1815  |
| Turn Type            | NA    | Perm  | NA    | Prot  | NA    |
| Protected Phases     | 2     |       | 1     | 3     | 1 3   |
| Permitted Phases     |       | 2     |       |       |       |
| Detector Phase       | 2     | 2     | 1     | 3     | 1 3   |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 10.0  | 4.0   |       |
| Minimum Split (s)    | 25.0  | 25.0  | 16.0  | 9.0   |       |
| Total Split (s)      | 25.0  | 25.0  | 45.0  | 10.0  | 55.0  |
| Total Split (%)      | 31.3% | 31.3% | 56.3% | 12.5% | 68.8% |
| Yellow Time (s)      | 3.0   | 3.0   | 4.0   | 3.0   |       |
| All-Red Time (s)     | 3.0   | 3.0   | 2.0   | 2.0   |       |
| Lost Time Adjust (s) | -3.0  | -3.0  | -3.0  | -2.0  | -3.0  |
| Total Lost Time (s)  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag             | Lag   | Lag   | Lead  |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |
| Recall Mode          | None  | None  | Max   | None  |       |
| Act Effct Green (s)  | 14.0  | 14.0  | 42.1  | 7.0   | 52.1  |
| Actuated g/C Ratio   | 0.19  | 0.19  | 0.58  | 0.10  | 0.72  |
| v/c Ratio            | 0.47  | 0.17  | 0.47  | 0.63  | 0.76  |
| Control Delay        | 30.3  | 8.3   | 9.6   | 50.6  | 9.4   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 30.3  | 8.3   | 9.6   | 50.6  | 9.4   |
| LOS                  | C     | A     | A     | D     | A     |
| Approach Delay       | 24.4  |       | 9.6   |       | 11.6  |
| Approach LOS         | C     |       | A     |       | B     |

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 72.1  
 Natural Cycle: 65  
 Control Type: Semi Act-Uncoord  
 Maximum v/c Ratio: 0.76  
 Intersection Signal Delay: 11.9  
 Intersection Capacity Utilization 65.4%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service C

Splits and Phases: 47: Van Dorn St/Van Dorn St & Taney Ave



Phasings

2020 Market with Traffic Mitigation  
PM PEAK

47: Van Dorn St/Van Dorn St & Taney Ave

|                         | ←     |       | ↑     |       | →     |  |
|-------------------------|-------|-------|-------|-------|-------|--|
| Lane Group              | WBL   | WBR   | NBT   | SBL   | SBT   |  |
| Protected Phases        | 2     |       | 1     | 3     | 1 3   |  |
| Permitted Phases        | 2     |       |       |       |       |  |
| Minimum Initial (s)     | 7.0   | 7.0   | 10.0  | 4.0   |       |  |
| Minimum Split (s)       | 25.0  | 25.0  | 16.0  | 9.0   |       |  |
| Total Split (s)         | 25.0  | 25.0  | 45.0  | 10.0  | 55.0  |  |
| Total Split (%)         | 31.3% | 31.3% | 56.3% | 12.5% | 68.8% |  |
| Maximum Green (s)       | 19.0  | 19.0  | 39.0  | 5.0   |       |  |
| Yellow Time (s)         | 3.0   | 3.0   | 4.0   | 3.0   |       |  |
| All-Red Time (s)        | 3.0   | 3.0   | 2.0   | 2.0   |       |  |
| Lead/Lag                | Lag   | Lag   | Lead  |       |       |  |
| Lead-Lag Optimize?      |       |       |       |       |       |  |
| Vehicle Extension (s)   | 2.0   | 2.0   | 0.2   | 2.0   |       |  |
| Minimum Gap (s)         | 2.0   | 2.0   | 0.2   | 2.0   |       |  |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   |       |  |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   |       |  |
| Recall Mode             | None  | None  | Max   | None  |       |  |
| Walk Time (s)           | 4.0   | 4.0   |       |       |       |  |
| Flash Dont Walk (s)     | 15.0  | 15.0  |       |       |       |  |
| Pedestrian Calls (#/hr) | 0     | 0     |       |       |       |  |
| 90th %ile Green (s)     | 15.9  | 15.9  | 39.0  | 5.0   |       |  |
| 90th %ile Term Code     | Gap   | Gap   | MaxR  | Max   |       |  |
| 70th %ile Green (s)     | 12.8  | 12.8  | 39.0  | 5.0   |       |  |
| 70th %ile Term Code     | Gap   | Gap   | MaxR  | Max   |       |  |
| 50th %ile Green (s)     | 10.8  | 10.8  | 39.0  | 5.0   |       |  |
| 50th %ile Term Code     | Gap   | Gap   | MaxR  | Max   |       |  |
| 30th %ile Green (s)     | 8.9   | 8.9   | 39.0  | 5.0   |       |  |
| 30th %ile Term Code     | Gap   | Gap   | MaxR  | Max   |       |  |
| 10th %ile Green (s)     | 7.0   | 7.0   | 39.0  | 5.0   |       |  |
| 10th %ile Term Code     | Min   | Min   | MaxR  | Max   |       |  |

Intersection Summary

|                                |
|--------------------------------|
| Cycle Length: 80               |
| Actuated Cycle Length: 72.1    |
| Control Type: Semi Act-Uncoord |
| 90th %ile Actuated Cycle: 76.9 |
| 70th %ile Actuated Cycle: 73.8 |
| 50th %ile Actuated Cycle: 71.8 |
| 30th %ile Actuated Cycle: 69.9 |
| 10th %ile Actuated Cycle: 68   |

Lanes and Geometrics

2020 Market with Traffic Mitigation  
PM PEAK

51: Beauregard St & New Sanger Ave

|                     | ←     |      | →     |       | ←    |       | ↑     |       | →    |       | ←    |      | ↓     |       | ←    |      |
|---------------------|-------|------|-------|-------|------|-------|-------|-------|------|-------|------|------|-------|-------|------|------|
| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT  | WBR   | NBL   | NBT   | NBR  | SBL   | SBT  | SBR  |       |       |      |      |
| Lane Configurations | ↔     | ↔    | ↔     | ↔     | ↔    | ↔     | ↔     | ↔     | ↔    | ↔     | ↔    | ↔    |       |       |      |      |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12   | 12   | 12    | 12    | 12   | 12   |
| Grade (%)           | 0%    |      | 0%    |       | 0%   |       | 0%    |       | 0%   |       | 0%   |      | 0%    |       | 0%   |      |
| Storage Length (ft) | 150   |      | 200   | 200   |      | 0     | 150   |       | 0    | 175   |      | 0    |       | 175   |      | 0    |
| Storage Lanes       | 1     |      | 1     | 1     |      | 1     | 1     |       | 0    | 1     |      | 0    |       | 1     |      | 0    |
| Taper Length (ft)   | 50    |      |       | 50    |      |       | 50    |       |      | 50    |      |      |       | 50    |      |      |
| 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 | 1.00  | 0.95  | 0.95 | 1.00 |
| Ped Bike Factor     |       |      | 0.850 |       |      | 0.850 |       | 0.954 |      |       |      |      | 0.992 |       |      |      |
| Frt                 |       |      |       |       |      |       |       |       |      |       |      |      |       |       |      |      |
| Flt Protected       | 0.950 |      |       | 0.950 |      |       | 0.950 |       |      | 0.950 |      |      |       | 0.950 |      |      |
| Satd. Flow (prot)   | 1770  | 1863 | 1583  | 1770  | 1863 | 1583  | 1770  | 3376  | 0    | 1770  | 3511 | 0    |       | 1770  | 3511 | 0    |
| Flt Permitted       | 0.719 |      |       | 0.486 |      |       | 0.170 |       |      | 0.183 |      |      |       | 0.183 |      |      |
| Satd. Flow (perm)   | 1339  | 1863 | 1583  | 905   | 1863 | 1583  | 317   | 3376  | 0    | 341   | 3511 | 0    |       | 341   | 3511 | 0    |
| Right Turn on Red   |       |      | Yes   |       |      | Yes   |       |       | Yes  |       |      |      | Yes   |       |      | Yes  |
| Satd. Flow (RTOR)   |       |      | 86    |       |      | 164   |       | 55    |      | 7     |      |      |       | 7     |      |      |
| Link Speed (mph)    |       | 25   |       |       | 25   |       |       | 35    |      |       |      |      |       | 35    |      |      |
| Link Distance (ft)  |       | 643  |       |       | 940  |       |       | 397   |      |       |      |      |       | 531   |      |      |
| Travel Time (s)     |       | 17.5 |       |       | 25.6 |       |       | 7.7   |      |       |      |      |       | 10.3  |      |      |

Intersection Summary

Area Type: Other

**Timings**  
**51: Beauregard St & New Sanger Ave**

2020 Market with Traffic Mitigation  
 PM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |       |       |
| Volume (vph)         | 55    | 65    | 80    | 205   | 55    | 155   | 85    | 470   | 445   | 1180  |
| Turn Type            | pm+pt | NA    | Perm  | pm+pt | NA    | pm+ov | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 7     | 4     |       | 3     | 8     | 1     | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 4     | 8     |       | 8     | 2     |       | 6     |       |
| Detector Phase       | 7     | 4     | 4     | 3     | 8     | 1     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 9.0   | 27.0  | 27.0  | 20.0  | 27.0  | 11.0  | 9.0   | 27.0  | 11.0  | 27.0  |
| Total Split (s)      | 9.0   | 27.0  | 27.0  | 20.0  | 38.0  | 41.0  | 9.0   | 32.0  | 41.0  | 64.0  |
| Total Split (%)      | 7.5%  | 22.5% | 22.5% | 16.7% | 31.7% | 34.2% | 7.5%  | 26.7% | 34.2% | 53.3% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 3.0   | 3.0   | 2.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -5.0  | -5.0  | 0.0   | -5.0  |
| Total Lost Time (s)  | 5.0   | 6.0   | 6.0   | 5.0   | 6.0   | 5.0   | 0.0   | 1.0   | 5.0   | 1.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lead  | Lag   | Lead  | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max |       |
| Act Effct Green (s)  | 14.9  | 9.9   | 9.9   | 30.3  | 22.1  | 59.4  | 61.0  | 47.4  | 79.7  | 71.1  |
| Actuated g/c Ratio   | 0.12  | 0.08  | 0.08  | 0.25  | 0.18  | 0.50  | 0.51  | 0.40  | 0.66  | 0.59  |
| v/c Ratio            | 0.33  | 0.46  | 0.41  | 0.66  | 0.17  | 0.19  | 0.29  | 0.53  | 0.80  | 0.65  |
| Control Delay        | 41.1  | 61.3  | 16.5  | 48.0  | 42.4  | 2.3   | 17.0  | 21.7  | 31.4  | 2.5   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 41.1  | 61.3  | 16.5  | 48.0  | 42.4  | 2.3   | 17.0  | 21.7  | 31.4  | 2.5   |
| LOS                  | D     | E     | B     | D     | D     | A     | B     | C     | C     | A     |
| Approach Delay       |       | 37.8  |       |       | 30.1  |       |       | 21.1  |       | 10.0  |
| Approach LOS         |       | D     |       |       | C     |       |       | C     |       | B     |

**Intersection Summary**

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 67 (56%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 95  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.80  
 Intersection Signal Delay: 17.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 74.7%  
 ICU Level of Service D  
 Analysis Period (min) 15



**Phasings**  
**51: Beauregard St & New Sanger Ave**

2020 Market with Traffic Mitigation  
 PM PEAK

| Lane Group              | EBL  | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | SBL   | SBT   |
|-------------------------|------|-------|-------|-------|-------|-------|------|-------|-------|-------|
| Protected Phases        | 7    | 4     |       | 3     | 8     | 1     | 5    | 2     | 1     | 6     |
| Permitted Phases        | 4    |       | 4     | 8     | 8     | 2     |      | 6     |       |       |
| Minimum Initial (s)     | 4.0  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0  | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 9.0  | 27.0  | 27.0  | 20.0  | 27.0  | 11.0  | 9.0  | 27.0  | 11.0  | 27.0  |
| Total Split (s)         | 9.0  | 27.0  | 27.0  | 20.0  | 38.0  | 41.0  | 9.0  | 32.0  | 41.0  | 64.0  |
| Total Split (%)         | 7.5% | 22.5% | 22.5% | 16.7% | 31.7% | 34.2% | 7.5% | 26.7% | 34.2% | 53.3% |
| Maximum Green (s)       | 4.0  | 21.0  | 21.0  | 15.0  | 32.0  | 36.0  | 4.0  | 26.0  | 36.0  | 58.0  |
| Yellow Time (s)         | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 2.0  | 3.0   | 3.0   | 2.0   | 3.0   | 2.0   | 2.0  | 2.0   | 2.0   | 2.0   |
| Lead/Lag                | Lead | Lag   | Lag   | Lead  | Lag   | Lead  | Lead | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |      |       |       |       |       |       |      |       |       |       |
| Vehicle Extension (s)   | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 4.0   | 3.0   | 4.0   |
| Minimum Gap (s)         | 3.0  | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None | None  | None  | None  | None  | None  | None | C-Max | None  | C-Max |
| Walk Time (s)           | 7.0  | 7.0   |       | 7.0   |       |       | 7.0  |       | 7.0   |       |
| Flash Dont Walk (s)     | 14.0 | 14.0  |       | 14.0  |       |       | 14.0 |       | 14.0  |       |
| Pedestrian Calls (#/hr) | 0    | 0     |       | 0     |       |       | 0    |       | 0     |       |
| 90th %ile Green (s)     | 4.0  | 13.6  | 13.6  | 15.0  | 24.6  | 42.9  | 9.8  | 26.5  | 42.9  | 59.6  |
| 90th %ile Term Code     | Max  | Gap   | Gap   | Max   | Hold  | Gap   | Gap  | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 4.0  | 11.4  | 11.4  | 15.0  | 22.4  | 36.6  | 8.1  | 35.0  | 36.6  | 63.5  |
| 70th %ile Term Code     | Max  | Gap   | Gap   | Max   | Hold  | Gap   | Gap  | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 4.0  | 9.9   | 9.9   | 15.0  | 20.9  | 31.0  | 7.4  | 42.1  | 31.0  | 65.7  |
| 50th %ile Term Code     | Max  | Gap   | Gap   | Max   | Hold  | Gap   | Gap  | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 4.0  | 8.3   | 8.3   | 15.0  | 19.3  | 25.9  | 6.7  | 48.8  | 25.9  | 68.0  |
| 30th %ile Term Code     | Max  | Gap   | Gap   | Max   | Hold  | Gap   | Gap  | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 0.0  | 6.1   | 6.1   | 12.3  | 23.4  | 20.1  | 5.9  | 59.5  | 20.1  | 73.7  |
| 10th %ile Term Code     | Skip | Gap   | Gap   | Gap   | Hold  | Gap   | Gap  | Coord | Gap   | Coord |

**Intersection Summary**

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 67 (56%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated



Lanes and Geometrics  
52: Beauregard St & Rayburn Ave

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT   | WBR   | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|---------------------|------|-------|-------|------|-------|-------|-------|-------|------|-------|-------|------|
| Lane Configurations |      | ↔     | ↔     |      | ↔     | ↔     | ↔     | ↔     |      | ↔     | ↔     |      |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           |      | 0%    |       |      | 0%    |       |       | 0%    |      |       | 0%    |      |
| Storage Length (ft) | 0    |       | 100   | 0    |       | 150   | 190   |       | 0    | 175   |       | 0    |
| Storage Lanes       | 0    |       | 1     | 0    |       | 1     | 1     |       | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50   |       |       | 50   |       |       | 50    |       |      | 50    |       |      |
| 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     |      |       |       |      | 0.98  | 0.96  |       | 1.00  |      |       | 1.00  |      |
| Frt                 |      |       | 0.850 |      |       | 0.850 |       | 0.994 |      |       | 0.983 |      |
| Flt Protected       |      | 0.955 |       |      | 0.959 |       | 0.950 |       |      | 0.950 |       |      |
| Satd. Flow (prot)   | 0    | 1779  | 1583  | 0    | 1786  | 1583  | 1770  | 3506  | 0    | 1770  | 3470  | 0    |
| Flt Permitted       |      | 0.678 |       |      | 0.401 |       | 0.051 |       |      | 0.363 |       |      |
| Satd. Flow (perm)   | 0    | 1263  | 1583  | 0    | 731   | 1526  | 95    | 3506  | 0    | 676   | 3470  | 0    |
| Right Turn on Red   |      |       | Yes   |      | Yes   |       | Yes   |       | Yes  |       | Yes   |      |
| Satd. Flow (RTOR)   |      |       | 46    |      |       | 32    |       | 6     |      |       | 22    |      |
| Link Speed (mph)    |      | 25    |       |      | 25    |       |       | 35    |      |       | 35    |      |
| Link Distance (ft)  |      | 354   |       |      | 559   |       |       | 713   |      |       | 718   |      |
| Travel Time (s)     |      | 9.7   |       |      | 15.2  |       |       | 13.9  |      |       | 14.0  |      |

Intersection Summary

Area Type: Other

Timings  
52: Beauregard St & Rayburn Ave

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       | ↔     | ↔     |       | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 195   | 10    | 50    | 65    | 10    | 30    | 60    | 640   | 15    | 1710  |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | Perm  | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     |       | 4     |       |       | 4     |       | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 4     | 4     |       | 4     | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 4.0   | 10.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 9.0   | 22.0  | 9.0   | 22.0  |
| Total Split (s)      | 30.0  | 30.0  | 30.0  | 30.0  | 30.0  | 30.0  | 9.0   | 81.0  | 9.0   | 81.0  |
| Total Split (%)      | 25.0% | 25.0% | 25.0% | 25.0% | 25.0% | 25.0% | 7.5%  | 67.5% | 7.5%  | 67.5% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  | 23.3  | 23.3  |       | 23.3  | 23.3  |       | 84.2  | 81.6  | 82.2  | 78.0  |
| Actuated g/C Ratio   | 0.19  | 0.19  |       | 0.19  | 0.19  |       | 0.70  | 0.68  | 0.68  | 0.65  |
| v/c Ratio            | 0.90  | 0.16  |       | 0.57  | 0.10  |       | 0.51  | 0.30  | 0.03  | 0.92  |
| Control Delay        | 84.2  | 15.0  |       | 60.3  | 13.6  |       | 36.2  | 4.4   | 5.3   | 15.7  |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 1.4   |
| Total Delay          | 84.2  | 15.0  |       | 60.3  | 13.6  |       | 36.2  | 4.4   | 5.3   | 17.0  |
| LOS                  | F     | B     |       | E     | B     |       | D     | A     | A     | B     |
| Approach Delay       | 70.6  |       |       | 47.1  |       |       | 7.0   |       |       | 16.9  |
| Approach LOS         | E     |       |       | D     |       |       | A     |       |       | B     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 105 (88%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.92  
 Intersection Signal Delay: 20.2  
 Intersection LOS: C  
 Intersection Capacity Utilization 86.2%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 52: Beauregard St & Rayburn Ave



Phasings  
52: Beauregard St & Rayburn Ave

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | SBL  | SBT   |   |
|-------------------------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|---|
| Protected Phases        | 4     |       |       |       | 4     |       | 5    |       | 2    | 1     | 6 |
| Permitted Phases        | 4     |       |       |       | 4     |       | 2    |       | 6    |       |   |
| Minimum Initial (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   | 4.0  | 10.0  | 4.0  | 10.0  |   |
| Minimum Split (s)       | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 27.5  | 9.0  | 22.0  | 9.0  | 22.0  |   |
| Total Split (s)         | 30.0  | 30.0  | 30.0  | 30.0  | 30.0  | 30.0  | 9.0  | 81.0  | 9.0  | 81.0  |   |
| Total Split (%)         | 25.0% | 25.0% | 25.0% | 25.0% | 25.0% | 25.0% | 7.5% | 67.5% | 7.5% | 67.5% |   |
| Maximum Green (s)       | 24.5  | 24.5  | 24.5  | 24.5  | 24.5  | 24.5  | 4.0  | 75.0  | 4.0  | 75.0  |   |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 4.0   | 3.0  | 4.0   |   |
| All-Red Time (s)        | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.5   | 2.0  | 2.0   | 2.0  | 2.0   |   |
| Lead/Lag                |       |       |       |       |       |       | Lead | Lag   | Lead | Lag   |   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |      |       |      |       |   |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 0.2   | 3.0  | 0.2   |   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 0.2   | 3.0  | 0.2   |   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   |   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   |   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None | C-Max | None | C-Max |   |
| Walk Time (s)           | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0  | 4.0   | 4.0  | 4.0   |   |
| Flash Dont Walk (s)     | 18.0  | 18.0  | 18.0  | 18.0  | 18.0  | 18.0  | 12.0 | 12.0  | 12.0 | 12.0  |   |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     | 0     | 0    | 0     | 0    | 0     |   |
| 90th %ile Green (s)     | 24.5  | 24.5  | 24.5  | 24.5  | 24.5  | 24.5  | 4.0  | 75.0  | 4.0  | 75.0  |   |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Max  | Coord | Max  | Coord |   |
| 70th %ile Green (s)     | 24.5  | 24.5  | 24.5  | 24.5  | 24.5  | 24.5  | 4.0  | 75.0  | 4.0  | 75.0  |   |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Max  | Coord | Max  | Coord |   |
| 50th %ile Green (s)     | 24.5  | 24.5  | 24.5  | 24.5  | 24.5  | 24.5  | 4.0  | 84.0  | 0.0  | 75.0  |   |
| 50th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Max   | Max  | Coord | Skip | Coord |   |
| 30th %ile Green (s)     | 24.3  | 24.3  | 24.3  | 24.3  | 24.3  | 24.3  | 4.2  | 84.2  | 0.0  | 75.0  |   |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Max  | Coord | Skip | Coord |   |
| 10th %ile Green (s)     | 18.7  | 18.7  | 18.7  | 18.7  | 18.7  | 18.7  | 0.0  | 89.8  | 0.0  | 89.8  |   |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Skip | Coord | Skip | Coord |   |

**Intersection Summary**  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 105 (88%), Referenced to phase 2:NBL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
53: Beauregard St & Reading Ave

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT  | WBR  | NBL   | NBT  | NBR  | SBL   | SBT  | SBR  |
|---------------------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|
| Lane Configurations |       |      |      |       |      |      |       |      |      |       |      |      |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12   | 12   | 12    | 12   | 12   |
| Grade (%)           | 0%    |      |      | 0%    |      |      | 0%    |      |      | 0%    |      |      |
| Storage Length (ft) | 0     |      | 100  |       | 0    |      | 150   |      | 165  |       | 0    |      |
| Storage Lanes       | 1     |      | 0    |       | 1    |      | 0     |      | 1    |       | 0    |      |
| Taper Length (ft)   | 50    |      | 50   |       | 50   |      | 50    |      | 50   |       | 50   |      |
| 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     | 0.98  |      |      | 0.98  |      |      | 1.00  |      |      | 1.00  |      |      |
| Frt                 | 0.858 |      |      | 0.865 |      |      | 0.991 |      |      | 0.991 |      |      |
| Flt Protected       | 0.950 |      |      | 0.950 |      |      | 0.950 |      |      | 0.950 |      |      |
| Satd. Flow (prot)   | 1770  | 1561 | 0    | 1770  | 1580 | 0    | 1770  | 3497 | 0    | 1770  | 3490 | 0    |
| Flt Permitted       | 0.672 |      |      | 0.695 |      |      | 0.052 |      |      | 0.442 |      |      |
| Satd. Flow (perm)   | 1252  | 1561 | 0    | 1295  | 1580 | 0    | 97    | 3497 | 0    | 823   | 3490 | 0    |
| Right Turn on Red   | Yes   |      |      | Yes   |      |      | Yes   |      |      | Yes   |      |      |
| Satd. Flow (RTOR)   | 91    |      |      | 97    |      |      | 9     |      |      | 9     |      |      |
| Link Speed (mph)    | 25    |      |      | 25    |      |      | 35    |      |      | 35    |      |      |
| Link Distance (ft)  | 602   |      |      | 584   |      |      | 927   |      |      | 713   |      |      |
| Travel Time (s)     | 16.4  |      |      | 15.9  |      |      | 18.1  |      |      | 13.9  |      |      |

**Intersection Summary**  
 Area Type: Other

Timings  
53: Beauregard St & Reading Ave

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       |       |       |       |       |       |       |       |
| Volume (vph)         | 145   | 5     | 15    | 10    | 160   | 490   | 130   | 1595  |
| 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)  | 8.0   | 8.0   | 8.0   | 8.0   | 6.0   | 10.0  | 6.0   | 10.0  |
| Minimum Split (s)    | 31.0  | 31.0  | 31.0  | 31.0  | 11.0  | 24.0  | 11.0  | 24.0  |
| Total Split (s)      | 31.0  | 31.0  | 31.0  | 31.0  | 16.0  | 78.0  | 11.0  | 73.0  |
| Total Split (%)      | 25.8% | 25.8% | 25.8% | 25.8% | 13.3% | 65.0% | 9.2%  | 60.8% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | C-Max | None  | C-Max |
| Act Effct Green (s)  | 19.4  | 19.4  | 19.4  | 19.4  | 88.4  | 76.7  | 80.8  | 72.9  |
| Actuated g/C Ratio   | 0.16  | 0.16  | 0.16  | 0.16  | 0.74  | 0.64  | 0.67  | 0.61  |
| v/c Ratio            | 0.77  | 0.29  | 0.08  | 0.32  | 0.78  | 0.25  | 0.23  | 0.86  |
| Control Delay        | 71.7  | 11.5  | 40.6  | 12.6  | 43.0  | 14.7  | 2.7   | 9.8   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.7   |
| Total Delay          | 71.7  | 11.5  | 40.6  | 12.6  | 43.0  | 14.7  | 2.7   | 10.5  |
| LOS                  | E     | B     | D     | B     | D     | B     | A     | B     |
| Approach Delay       |       | 48.8  |       | 16.2  |       | 21.4  |       | 9.9   |
| Approach LOS         |       | D     |       | B     |       | C     |       | A     |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 1 (1%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 16.1  
 Intersection LOS: B  
 Intersection Capacity Utilization 86.7%  
 ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 53: Beauregard St & Reading Ave



Phasings  
53: Beauregard St & Reading Ave

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL  | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|------|-------|
| Protected Phases        |       | 4     |       | 4     | 5     | 2     | 1    | 6     |
| Permitted Phases        | 4     |       | 4     |       | 2     |       | 6    |       |
| Minimum Initial (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 6.0   | 10.0  | 6.0  | 10.0  |
| Minimum Split (s)       | 31.0  | 31.0  | 31.0  | 31.0  | 11.0  | 24.0  | 11.0 | 24.0  |
| Total Split (s)         | 31.0  | 31.0  | 31.0  | 31.0  | 16.0  | 78.0  | 11.0 | 73.0  |
| Total Split (%)         | 25.8% | 25.8% | 25.8% | 25.8% | 13.3% | 65.0% | 9.2% | 60.8% |
| Maximum Green (s)       | 25.0  | 25.0  | 25.0  | 25.0  | 11.0  | 72.0  | 6.0  | 67.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0  | 2.0   |
| Lead/Lag                |       |       |       |       | Lead  | Lag   | Lead | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |      |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | C-Max | None | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   |       | 7.0   |      | 7.0   |
| Flash Dont Walk (s)     | 18.0  | 18.0  | 18.0  | 18.0  |       | 8.0   |      | 8.0   |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     |       | 0     |      | 0     |
| 90th %ile Green (s)     | 25.0  | 25.0  | 25.0  | 25.0  | 11.0  | 72.0  | 6.0  | 67.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Coord | Max  | Coord |
| 70th %ile Green (s)     | 23.9  | 23.9  | 23.9  | 23.9  | 12.1  | 72.0  | 7.1  | 67.0  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Max   | Coord | Max  | Coord |
| 50th %ile Green (s)     | 19.8  | 19.8  | 19.8  | 19.8  | 13.0  | 75.1  | 8.1  | 70.2  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Coord | Coord | Gap  | Coord |
| 30th %ile Green (s)     | 16.5  | 16.5  | 16.5  | 16.5  | 10.2  | 79.3  | 7.2  | 76.3  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Coord | Coord | Gap  | Coord |
| 10th %ile Green (s)     | 11.7  | 11.7  | 11.7  | 11.7  | 7.2   | 85.1  | 6.2  | 84.1  |
| 10th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Coord | Coord | Gap  | Coord |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 1 (1%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
54: Beauregard St & N Morgan St

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR  | WBL   | WBT   | WBR   | NBL   | NBT  | NBR   | SBL  | SBT   | SBR  |
|---------------------|-------|------|------|-------|-------|-------|-------|------|-------|------|-------|------|
| Lane Configurations | ↔     | ↔    | ↔    | ↔     | ↔     | ↔     | ↔     | ↔    | ↔     | ↔    | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12    | 12    | 12   | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |      | 0%   |       | 0%    |       | 0%    |      | 0%    |      | 0%    |      |
| Storage Length (ft) | 0     |      | 175  | 0     |       | 0     | 115   |      | 0     | 115  |       | 0    |
| Storage Lanes       | 1     |      | 1    | 0     |       | 0     | 1     |      | 0     | 1    |       | 0    |
| Taper Length (ft)   | 50    |      |      | 50    |       |       | 50    |      |       | 50   |       |      |
| 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     | 0.96  |      |      |       | 0.99  |       | 1.00  |      |       |      | 0.99  |      |
| Frt                 | 0.850 |      |      |       | 0.932 |       | 0.995 |      |       |      | 0.978 |      |
| Flt Protected       | 0.950 |      |      | 0.976 |       | 0.950 |       |      | 0.950 |      |       |      |
| Satd. Flow (prot)   | 1770  | 1524 | 0    | 0     | 1679  | 0     | 1770  | 3515 | 0     | 1770 | 3436  | 0    |
| Flt Permitted       | 0.766 |      |      | 0.836 |       | 0.135 |       |      | 0.363 |      |       |      |
| Satd. Flow (perm)   | 1427  | 1524 | 0    | 0     | 1438  | 0     | 251   | 3515 | 0     | 676  | 3436  | 0    |
| Right Turn on Red   |       |      | Yes  |       |       | Yes   |       |      | Yes   |      |       | Yes  |
| Satd. Flow (RTOR)   | 124   |      |      |       | 32    |       | 5     |      |       |      | 31    |      |
| Link Speed (mph)    | 25    |      |      |       | 25    |       | 35    |      |       |      | 35    |      |
| Link Distance (ft)  | 775   |      |      |       | 737   |       | 1035  |      |       |      | 958   |      |
| Travel Time (s)     | 21.1  |      |      |       | 20.1  |       | 20.2  |      |       |      | 18.7  |      |

Intersection Summary

Area Type: Other

Timings  
54: Beauregard St & N Morgan St

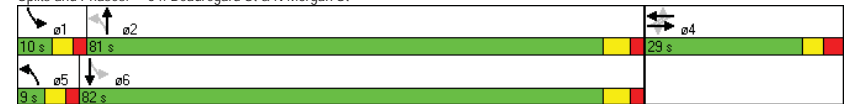
2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 75    | 0     | 30    | 0     | 10    | 655   | 80    | 1185  |
| Turn Type            | Perm  | NA    | Perm  | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     | 4     |       | 4     |       | 5     |       | 6     |       |
| Permitted Phases     | 4     |       | 4     |       | 2     |       | 6     |       |
| Detector Phase       | 4     |       | 4     |       | 5     |       | 2     |       |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 8.0   | 8.0   | 8.0   | 8.0   | 4.0   | 15.0  | 4.0   | 10.0  |
| Minimum Split (s)    | 27.0  | 27.0  | 27.0  | 27.0  | 9.0   | 21.0  | 9.0   | 21.0  |
| Total Split (s)      | 29.0  | 29.0  | 29.0  | 29.0  | 9.0   | 81.0  | 10.0  | 82.0  |
| Total Split (%)      | 24.2% | 24.2% | 24.2% | 24.2% | 7.5%  | 67.5% | 8.3%  | 68.3% |
| Yellow Time (s)      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | Max   | C-Max | None  | C-Max |
| Act Effct Green (s)  | 12.4  | 12.4  |       | 12.4  | 91.8  | 87.6  | 92.5  | 86.6  |
| Actuated g/C Ratio   | 0.10  | 0.10  |       | 0.10  | 0.76  | 0.73  | 0.77  | 0.72  |
| v/c Ratio            | 0.55  | 0.04  |       | 0.36  | 0.05  | 0.28  | 0.15  | 0.60  |
| Control Delay        | 64.2  | 0.3   |       | 33.1  | 2.1   | 2.5   | 1.8   | 2.7   |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 64.2  | 0.3   |       | 33.1  | 2.1   | 2.5   | 1.8   | 2.7   |
| LOS                  | E     | A     |       | C     | A     | A     | A     | A     |
| Approach Delay       | 56.5  |       | 33.1  |       | 2.5   |       | 2.7   |       |
| Approach LOS         | E     |       | C     |       | A     |       | A     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 60 (50%), Referenced to phase 2:NBT and 6:SBTL, Start of Green  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.60  
 Intersection Signal Delay: 5.4  
 Intersection LOS: A  
 Intersection Capacity Utilization 68.1%  
 ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 54: Beauregard St & N Morgan St



Phasings  
54: Beauregard St & N Morgan St

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL  | NBT   | SBL  | SBT   |
|-------------------------|-------|-------|-------|-------|------|-------|------|-------|
| Protected Phases        |       | 4     |       | 4     | 5    | 2     | 1    | 6     |
| Permitted Phases        | 4     |       | 4     |       | 2    |       | 6    |       |
| Minimum Initial (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 4.0  | 15.0  | 4.0  | 10.0  |
| Minimum Split (s)       | 27.0  | 27.0  | 27.0  | 27.0  | 9.0  | 21.0  | 9.0  | 21.0  |
| Total Split (s)         | 29.0  | 29.0  | 29.0  | 29.0  | 9.0  | 81.0  | 10.0 | 82.0  |
| Total Split (%)         | 24.2% | 24.2% | 24.2% | 24.2% | 7.5% | 67.5% | 8.3% | 68.3% |
| Maximum Green (s)       | 23.0  | 23.0  | 23.0  | 23.0  | 4.0  | 75.0  | 5.0  | 76.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 4.0   | 3.0  | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 2.0  | 2.0   | 2.0  | 2.0   |
| Lead/Lag                |       |       |       |       | Lead | Lag   | Lead | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |      |       |      |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0  | 4.0   | 2.0  | 4.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 0.2  | 0.2   | 0.2  | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0  | 0.0   |
| Recall Mode             | None  | None  | None  | None  | Max  | C-Max | None | C-Max |
| Walk Time (s)           | 4.0   | 4.0   | 4.0   | 4.0   |      | 7.0   |      | 7.0   |
| Flash Dont Walk (s)     | 17.0  | 17.0  | 17.0  | 17.0  |      | 8.0   |      | 8.0   |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     |      | 0     |      | 0     |
| 90th %ile Green (s)     | 17.5  | 17.5  | 17.5  | 17.5  | 4.0  | 80.5  | 5.0  | 81.5  |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | MaxR | Coord | Max  | Coord |
| 70th %ile Green (s)     | 14.4  | 14.4  | 14.4  | 14.4  | 4.0  | 83.6  | 5.0  | 84.6  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | MaxR | Coord | Max  | Coord |
| 50th %ile Green (s)     | 12.2  | 12.2  | 12.2  | 12.2  | 4.0  | 85.8  | 5.0  | 86.8  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | MaxR | Coord | Max  | Coord |
| 30th %ile Green (s)     | 10.0  | 10.0  | 10.0  | 10.0  | 4.0  | 88.0  | 5.0  | 89.0  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | MaxR | Coord | Max  | Coord |
| 10th %ile Green (s)     | 8.0   | 8.0   | 8.0   | 8.0   | 4.0  | 100.0 | 0.0  | 91.0  |
| 10th %ile Term Code     | Min   | Min   | Min   | Min   | MaxR | Coord | Skip | Coord |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 60 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
55: Beauregard St & N Armistead St

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL  | EBT   | EBR   | WBL  | WBT   | WBR   | NBL   | NBT   | NBR  | SBL   | SBT   | SBR  |
|---------------------|------|-------|-------|------|-------|-------|-------|-------|------|-------|-------|------|
| Lane Configurations |      | ↕     | ↕     |      | ↕     | ↕     | ↕     | ↕↔    | ↕↔   |       | ↕     | ↕    |
| Ideal Flow (vphpl)  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12    | 12    | 12   | 12    | 12    | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           |      | 0%    |       |      | 0%    |       |       | 0%    |      |       | 0%    |      |
| Storage Length (ft) | 0    |       | 50    | 0    |       | 50    | 90    |       | 0    | 80    |       | 0    |
| Storage Lanes       | 0    |       | 1     | 0    |       | 1     | 1     |       | 0    | 1     |       | 0    |
| Taper Length (ft)   | 50   |       |       | 50   |       |       | 50    |       |      | 50    |       |      |
| 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     |      |       |       |      |       | 0.98  |       | 1.00  |      |       | 1.00  |      |
| Frt                 |      |       | 0.850 |      |       | 0.850 |       | 0.992 |      |       | 0.996 |      |
| Flt Protected       |      | 0.950 |       |      | 0.950 |       | 0.950 |       |      | 0.950 |       |      |
| Satd. Flow (prot)   | 0    | 1770  | 1583  | 0    | 1770  | 1583  | 1770  | 3503  | 0    | 1770  | 3523  | 0    |
| Flt Permitted       |      | 0.719 |       |      | 0.750 |       | 0.251 |       |      | 0.382 |       |      |
| Satd. Flow (perm)   | 0    | 1339  | 1583  | 0    | 1397  | 1555  | 468   | 3503  | 0    | 712   | 3523  | 0    |
| Right Turn on Red   |      |       | Yes   |      |       | Yes   |       |       | Yes  |       |       | Yes  |
| Satd. Flow (RTOR)   |      |       | 27    |      |       | 134   |       | 6     |      | 3     |       |      |
| Link Speed (mph)    |      | 25    |       |      | 25    |       |       | 35    |      | 35    |       |      |
| Link Distance (ft)  |      | 620   |       |      | 778   |       |       | 1020  |      | 1035  |       |      |
| Travel Time (s)     |      | 16.9  |       |      | 21.2  |       |       | 19.9  |      | 20.2  |       |      |

Intersection Summary

Area Type: Other

Timings  
55: Beauregard St & N Armistead St

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  |       | ↕     | ↕     |       | ↕     | ↕     | ↕     | ↕     | ↕     | ↕     |
| Volume (vph)         | 10    | 0     | 25    | 55    | 0     | 125   | 10    | 550   | 180   | 1020  |
| Turn Type            | Perm  | NA    | Perm  | Perm  | NA    | Perm  | pm+pt | NA    | pm+pt | NA    |
| Protected Phases     |       | 4     |       |       | 4     |       | 5     | 2     | 1     | 6     |
| Permitted Phases     | 4     |       | 4     | 4     |       | 4     | 2     |       | 6     |       |
| Detector Phase       | 4     | 4     | 4     | 4     | 4     | 4     | 5     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 5.0   | 12.0  | 5.0   | 12.0  |
| Minimum Split (s)    | 36.5  | 36.5  | 36.5  | 36.5  | 36.5  | 36.5  | 10.0  | 22.0  | 10.0  | 22.0  |
| Total Split (s)      | 40.0  | 40.0  | 40.0  | 40.0  | 40.0  | 40.0  | 10.0  | 57.0  | 23.0  | 70.0  |
| Total Split (%)      | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% | 8.3%  | 47.5% | 19.2% | 58.3% |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 6.5   | 5.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       |       |       |       |       | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  | None  | None  | None  | None  | C-Max | None  | C-Max | None  |
| Act Effct Green (s)  | 10.7  | 10.7  |       | 10.7  | 10.7  | 89.5  | 83.5  | 97.8  | 94.8  |       |
| Actuated g/C Ratio   | 0.09  | 0.09  |       | 0.09  | 0.09  | 0.75  | 0.70  | 0.82  | 0.79  |       |
| v/c Ratio            | 0.09  | 0.16  |       | 0.48  | 0.51  | 0.03  | 0.26  | 0.30  | 0.40  |       |
| Control Delay        | 49.8  | 18.9  |       | 63.7  | 15.4  | 2.8   | 6.2   | 4.6   | 6.4   |       |
| Queue Delay          | 0.0   | 0.0   |       | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Total Delay          | 49.8  | 18.9  |       | 63.7  | 15.4  | 2.8   | 6.2   | 4.6   | 6.4   |       |
| LOS                  | D     | B     |       | E     | B     | A     | A     | A     | A     |       |
| Approach Delay       | 27.9  |       |       | 30.1  |       |       | 6.1   |       | 6.2   |       |
| Approach LOS         | C     |       |       | C     |       |       | A     |       | A     |       |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 62 (52%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.51  
 Intersection Signal Delay: 8.6  
 Intersection LOS: A  
 Intersection Capacity Utilization 59.8%  
 ICU Level of Service B  
 Analysis Period (min) 15

Splits and Phases: 55: Beauregard St & N Armistead St



Phasings  
55: Beauregard St & N Armistead St

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL  | NBT   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|
| Protected Phases        |       | 4     |       |       | 4     |       | 5    | 2     | 1     | 6     |
| Permitted Phases        | 4     |       | 4     | 4     |       | 4     |      |       | 6     |       |
| Minimum Initial (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 5.0  | 12.0  | 5.0   | 12.0  |
| Minimum Split (s)       | 36.5  | 36.5  | 36.5  | 36.5  | 36.5  | 36.5  | 10.0 | 22.0  | 10.0  | 22.0  |
| Total Split (s)         | 40.0  | 40.0  | 40.0  | 40.0  | 40.0  | 40.0  | 10.0 | 57.0  | 23.0  | 70.0  |
| Total Split (%)         | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% | 8.3% | 47.5% | 19.2% | 58.3% |
| Maximum Green (s)       | 33.5  | 33.5  | 33.5  | 33.5  | 33.5  | 33.5  | 5.0  | 51.0  | 18.0  | 64.0  |
| Yellow Time (s)         | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.0  | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0  | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       |       |       | Lead | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |      |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2  | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | None  | None  | None  | None  | None | C-Max | None  | C-Max |
| Walk Time (s)           | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |      | 4.0   |       | 4.0   |
| Flash Dont Walk (s)     | 23.0  | 23.0  | 23.0  | 23.0  | 23.0  | 23.0  |      | 12.0  |       | 12.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     | 0     |      | 0     |       | 0     |
| 90th %ile Green (s)     | 15.1  | 15.1  | 15.1  | 15.1  | 15.1  | 15.1  | 5.0  | 76.7  | 10.7  | 82.4  |
| 90th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Max  | Coord | Gap   | Coord |
| 70th %ile Green (s)     | 12.3  | 12.3  | 12.3  | 12.3  | 12.3  | 12.3  | 0.0  | 81.1  | 9.1   | 95.2  |
| 70th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Skip | Coord | Gap   | Coord |
| 50th %ile Green (s)     | 10.4  | 10.4  | 10.4  | 10.4  | 10.4  | 10.4  | 0.0  | 84.0  | 8.1   | 97.1  |
| 50th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Skip | Coord | Gap   | Coord |
| 30th %ile Green (s)     | 8.6   | 8.6   | 8.6   | 8.6   | 8.6   | 8.6   | 0.0  | 86.5  | 7.4   | 98.9  |
| 30th %ile Term Code     | Gap   | Gap   | Gap   | Gap   | Gap   | Gap   | Skip | Coord | Gap   | Coord |
| 10th %ile Green (s)     | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 0.0  | 89.0  | 6.5   | 100.5 |
| 10th %ile Term Code     | Min   | Min   | Min   | Min   | Min   | Min   | Skip | Coord | Gap   | Coord |

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 62 (52%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
56: Beauregard St & Quantrell Ave

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | WBL   | WBR   | NBT  | NBR   | SBL   | SBT  |
|---------------------|-------|-------|------|-------|-------|------|
| Lane Configurations | ↔     | ↔     | ↕    | ↕     | ↔     | ↕    |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           | 0%    |       | 0%   |       |       | 0%   |
| Storage Length (ft) | 0     | 50    |      | 85    | 100   |      |
| Storage Lanes       | 1     | 1     |      | 1     | 1     |      |
| Taper Length (ft)   | 50    |       |      |       | 50    |      |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95 | 1.00  | 1.00  | 0.95 |
| Ped Bike Factor     | 0.98  |       |      |       |       |      |
| Frt                 |       | 0.850 |      | 0.850 |       |      |
| Flt Protected       | 0.950 |       |      |       | 0.950 |      |
| Satd. Flow (prot)   | 1770  | 1583  | 3539 | 1583  | 1770  | 3539 |
| Flt Permitted       | 0.950 |       |      |       | 0.426 |      |
| Satd. Flow (perm)   | 1728  | 1583  | 3539 | 1583  | 794   | 3539 |
| Right Turn on Red   |       | Yes   |      | Yes   |       |      |
| Satd. Flow (RTOR)   |       | 38    |      | 91    |       |      |
| Link Speed (mph)    | 30    |       | 35   |       |       | 35   |
| Link Distance (ft)  | 751   |       | 931  |       |       | 1020 |
| Travel Time (s)     | 17.1  |       | 18.1 |       |       | 19.9 |

Intersection Summary

Area Type: Other

Timings  
56: Beauregard St & Quantrell Ave

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↕     | ↕     | ↔     | ↕     |
| Volume (vph)         | 105   | 35    | 555   | 85    | 80    | 1020  |
| Turn Type            | NA    | Perm  | NA    | Perm  | Perm  | NA    |
| Protected Phases     | 4     |       | 2     |       |       | 2     |
| Permitted Phases     |       | 4     |       | 2     | 2     |       |
| Detector Phase       | 4     | 4     | 2     | 2     | 2     | 2     |
| Switch Phase         |       |       |       |       |       |       |
| Minimum Initial (s)  | 6.0   | 6.0   | 10.0  | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)    | 12.0  | 12.0  | 16.0  | 16.0  | 16.0  | 16.0  |
| Total Split (s)      | 19.0  | 19.0  | 41.0  | 41.0  | 41.0  | 41.0  |
| Total Split (%)      | 31.7% | 31.7% | 68.3% | 68.3% | 68.3% | 68.3% |
| Yellow Time (s)      | 3.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0   |

Lead/Lag

Lead-Lag Optimize?

| Recall Mode         | None | None | C-Max | C-Max | C-Max | C-Max |
|---------------------|------|------|-------|-------|-------|-------|
| Act Effct Green (s) | 9.2  | 9.2  | 42.4  | 42.4  | 42.4  | 42.4  |
| Actuated g/C Ratio  | 0.15 | 0.15 | 0.71  | 0.71  | 0.71  | 0.71  |
| v/c Ratio           | 0.42 | 0.14 | 0.24  | 0.08  | 0.15  | 0.44  |
| Control Delay       | 27.0 | 9.1  | 4.8   | 1.6   | 5.0   | 4.6   |
| Queue Delay         | 0.0  | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay         | 27.0 | 9.1  | 4.8   | 1.6   | 5.0   | 4.6   |
| LOS                 | C    | A    | A     | A     | A     | A     |
| Approach Delay      | 22.5 |      | 4.4   |       |       | 4.7   |
| Approach LOS        | C    |      | A     |       |       | A     |

Intersection Summary

Cycle Length: 60  
 Actuated Cycle Length: 60  
 Offset: 25 (42%), Referenced to phase 2:NBSB, Start of Green  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.44  
 Intersection Signal Delay: 5.9  
 Intersection Capacity Utilization 44.5%  
 Analysis Period (min) 15  
 Intersection LOS: A  
 ICU Level of Service A

Splits and Phases: 56: Beauregard St & Quantrell Ave



Phasings  
56: Beauregard St & Quantrell Ave

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 4     |       | 2     |       |       | 2     |
| Permitted Phases        |       | 4     |       | 2     | 2     |       |
| Minimum Initial (s)     | 6.0   | 6.0   | 10.0  | 10.0  | 10.0  | 10.0  |
| Minimum Split (s)       | 12.0  | 12.0  | 16.0  | 16.0  | 16.0  | 16.0  |
| Total Split (s)         | 19.0  | 19.0  | 41.0  | 41.0  | 41.0  | 41.0  |
| Total Split (%)         | 31.7% | 31.7% | 68.3% | 68.3% | 68.3% | 68.3% |
| Maximum Green (s)       | 13.0  | 13.0  | 35.0  | 35.0  | 35.0  | 35.0  |
| Yellow Time (s)         | 3.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   | 0.2   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s)           |       |       |       |       |       |       |
| Flash Dont Walk (s)     |       |       |       |       |       |       |
| Pedestrian Calls (#/hr) |       |       |       |       |       |       |
| 90th %ile Green (s)     | 12.5  | 12.5  | 35.5  | 35.5  | 35.5  | 35.5  |
| 90th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 70th %ile Green (s)     | 10.5  | 10.5  | 37.5  | 37.5  | 37.5  | 37.5  |
| 70th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 50th %ile Green (s)     | 9.1   | 9.1   | 38.9  | 38.9  | 38.9  | 38.9  |
| 50th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 30th %ile Green (s)     | 7.7   | 7.7   | 40.3  | 40.3  | 40.3  | 40.3  |
| 30th %ile Term Code     | Gap   | Gap   | Coord | Coord | Coord | Coord |
| 10th %ile Green (s)     | 0.0   | 0.0   | 54.0  | 54.0  | 54.0  | 54.0  |
| 10th %ile Term Code     | Skip  | Skip  | Coord | Coord | Coord | Coord |

| Intersection Summary   |  |  |  |  |  |  |
|------------------------|--|--|--|--|--|--|
| Cycle Length:          | 60   |  |  |  |  |  |
| Actuated Cycle Length: | 60   |  |  |  |  |  |
| Offset:                | 25 (42%), Referenced to phase 2-NBSB, Start of Green |  |  |  |  |  |
| Control Type:          | Actuated-Coordinated                                 |  |  |  |  |  |

Lanes and Geometrics  
58: Lincolnia Rd/Gloucester Rd & Beauregard St

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT  | WBR  | NBL  | NBT   | NBR   | SBL  | SBT  | SBR   |
|---------------------|-------|-------|------|-------|------|------|------|-------|-------|------|------|-------|
| Lane Configurations |       |       |      |       |      |      |      |       |       |      |      |       |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12   | 12   | 12   | 12    | 12    | 12   | 12   | 12    |
| Grade (%)           |       | 0%    |      |       | 0%   |      |      | 0%    |       |      | 0%   |       |
| Storage Length (ft) | 175   |       | 0    | 175   |      | 0    | 0    |       | 0     | 0    |      | 0     |
| Storage Lanes       | 1     |       | 0    | 1     |      | 0    | 0    |       | 1     | 0    |      | 0     |
| Taper Length (ft)   | 50    |       |      | 50    |      |      | 50   |       | 50    |      |      | 50    |
| 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  |
| Ped Bike Factor     |       | 0.99  |      |       |      |      |      | 0.99  |       |      |      |       |
| Frt                 |       | 0.974 |      |       |      |      |      |       | 0.850 |      |      | 0.865 |
| Flt Protected       | 0.950 |       |      | 0.950 |      |      |      | 0.950 |       |      |      |       |
| Satd. Flow (prot)   | 1770  | 3430  | 0    | 1770  | 3539 | 0    | 0    | 1770  | 1583  | 0    | 1611 | 0     |
| Flt Permitted       | 0.191 |       |      | 0.288 |      |      |      | 0.754 |       |      |      |       |
| Satd. Flow (perm)   | 356   | 3430  | 0    | 536   | 3539 | 0    | 0    | 1405  | 1561  | 0    | 1611 | 0     |
| Right Turn on Red   |       |       | Yes  |       |      | Yes  |      |       | Yes   |      |      | Yes   |
| Satd. Flow (RTOR)   |       | 41    |      |       |      |      |      |       | 97    |      |      | 216   |
| Link Speed (mph)    |       | 35    |      |       | 35   |      |      |       | 35    |      |      | 30    |
| Link Distance (ft)  |       | 545   |      |       | 931  |      |      |       | 614   |      |      | 831   |
| Travel Time (s)     |       | 10.6  |      |       | 18.1 |      |      |       | 12.0  |      |      | 18.9  |

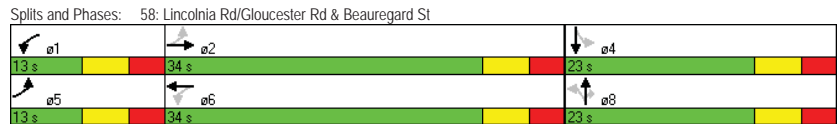
| Intersection Summary |       |
|----------------------|-------|
| Area Type:           | Other |



Timings 2020 Market with Traffic Mitigation  
PM PEAK  
58: Lincolnia Rd/Gloucester Rd & Beauregard St

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↖     | ↖↗    | ↖     | ↖↗    | ↖     | ↖     | ↖↗    | ↖↗    |
| Volume (vph)         | 15    | 550   | 95    | 1030  | 225   | 0     | 90    | 0     |
| Turn Type            | pm+pt | NA    | pm+pt | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 5     | 2     | 1     | 6     |       | 8     |       | 4     |
| Permitted Phases     | 2     |       | 6     |       | 8     |       | 8     |       |
| Detector Phase       | 5     | 2     | 1     | 6     | 8     | 8     | 8     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 13.0  | 17.0  | 13.0  | 17.0  | 15.0  | 15.0  | 15.0  | 15.0  |
| Total Split (s)      | 13.0  | 34.0  | 13.0  | 34.0  | 23.0  | 23.0  | 23.0  | 23.0  |
| Total Split (%)      | 18.6% | 48.6% | 18.6% | 48.6% | 32.9% | 32.9% | 32.9% | 32.9% |
| Yellow Time (s)      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   |       |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | Min   | None  | Min   | None  | None  | None  | None  |
| Act Effct Green (s)  | 26.2  | 21.7  | 30.6  | 29.5  | 14.1  | 14.1  | 14.1  |       |
| Actuated g/C Ratio   | 0.44  | 0.36  | 0.51  | 0.49  | 0.23  | 0.23  | 0.23  |       |
| v/c Ratio            | 0.05  | 0.56  | 0.26  | 0.64  | 0.73  | 0.22  | 0.01  |       |
| Control Delay        | 7.7   | 17.8  | 9.2   | 14.9  | 37.9  | 6.9   | 0.0   |       |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |       |
| Total Delay          | 7.7   | 17.8  | 9.2   | 14.9  | 37.9  | 6.9   | 0.0   |       |
| LOS                  | A     | B     | A     | B     | D     | A     | A     |       |
| Approach Delay       |       | 17.5  |       | 14.4  |       | 29.0  |       | 0.0   |
| Approach LOS         |       | B     |       | B     |       | C     |       | A     |

| Intersection Summary               |                        |
|------------------------------------|------------------------|
| Cycle Length:                      | 70                     |
| Actuated Cycle Length:             | 60.1                   |
| Natural Cycle:                     | 60                     |
| Control Type:                      | Actuated-Uncoordinated |
| Maximum v/c Ratio:                 | 0.73                   |
| Intersection Signal Delay:         | 17.5                   |
| Intersection LOS:                  | B                      |
| Intersection Capacity Utilization: | 69.0%                  |
| ICU Level of Service:              | C                      |
| Analysis Period (min):             | 15                     |



Phasings 2020 Market with Traffic Mitigation  
PM PEAK  
58: Lincolnia Rd/Gloucester Rd & Beauregard St

| Lane Group              | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | NBR   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 5     | 2     | 1     | 6     |       | 8     |       | 4     |
| Permitted Phases        | 2     |       | 6     |       | 8     |       | 8     |       |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 13.0  | 17.0  | 13.0  | 17.0  | 15.0  | 15.0  | 15.0  | 15.0  |
| Total Split (s)         | 13.0  | 34.0  | 13.0  | 34.0  | 23.0  | 23.0  | 23.0  | 23.0  |
| Total Split (%)         | 18.6% | 48.6% | 18.6% | 48.6% | 32.9% | 32.9% | 32.9% | 32.9% |
| Maximum Green (s)       | 6.0   | 27.0  | 6.0   | 27.0  | 16.0  | 16.0  | 16.0  | 16.0  |
| Yellow Time (s)         | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | Min   | None  | Min   | None  | None  | None  | None  |
| Walk Time (s)           |       | 7.0   |       | 7.0   |       | 7.0   |       | 7.0   |
| Flash Dont Walk (s)     |       | 19.0  |       |       | 23.0  | 23.0  |       | 22.0  |
| Pedestrian Calls (#/hr) |       | 0     |       |       | 0     | 0     |       | 0     |
| 90th %ile Green (s)     | 6.0   | 27.0  | 6.0   | 27.0  | 16.0  | 16.0  | 16.0  | 16.0  |
| 90th %ile Term Code     | Max   | Hold  | Max   | Max   | Max   | Max   | Max   | Hold  |
| 70th %ile Green (s)     | 0.0   | 20.9  | 6.0   | 33.9  | 16.0  | 16.0  | 16.0  | 16.0  |
| 70th %ile Term Code     | Skip  | Gap   | Max   | Hold  | Max   | Max   | Max   | Hold  |
| 50th %ile Green (s)     | 0.0   | 18.7  | 6.0   | 31.7  | 16.0  | 16.0  | 16.0  | 16.0  |
| 50th %ile Term Code     | Skip  | Gap   | Max   | Hold  | Max   | Max   | Max   | Hold  |
| 30th %ile Green (s)     | 0.0   | 15.5  | 6.0   | 28.5  | 13.1  | 13.1  | 13.1  | 13.1  |
| 30th %ile Term Code     | Skip  | Gap   | Max   | Hold  | Gap   | Gap   | Gap   | Hold  |
| 10th %ile Green (s)     | 0.0   | 25.3  | 0.0   | 25.3  | 9.9   | 9.9   | 9.9   | 9.9   |
| 10th %ile Term Code     | Skip  | Dwell | Skip  | Dwell | Gap   | Gap   | Gap   | Hold  |

| Intersection Summary      |                        |
|---------------------------|------------------------|
| Cycle Length:             | 70                     |
| Actuated Cycle Length:    | 60.1                   |
| Control Type:             | Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: | 70                     |
| 70th %ile Actuated Cycle: | 63.9                   |
| 50th %ile Actuated Cycle: | 61.7                   |
| 30th %ile Actuated Cycle: | 55.6                   |
| 10th %ile Actuated Cycle: | 49.2                   |

Lanes and Geometrics  
59: Beauregard St & N Chambliss St/Plaza at Landmark

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL   | WBT   | WBR  | NBL   | NBT  | NBR   | SBL   | SBT   | SBR  |
|---------------------|-------|------|-------|-------|-------|------|-------|------|-------|-------|-------|------|
| Lane Configurations | ↔     | ↔    | ↔     | ↔     | ↔     | ↔    | ↔     | ↔    | ↔     | ↔     | ↔     | ↔    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12    | 12    | 12   | 12    | 12   | 12    | 12    | 12    | 12   |
| Grade (%)           |       | 0%   |       |       | 0%    |      |       | 0%   |       |       | 0%    |      |
| Storage Length (ft) | 0     |      | 75    | 0     |       | 0    | 200   |      | 140   | 170   |       | 0    |
| Storage Lanes       | 1     |      | 1     | 1     |       | 0    | 1     |      | 1     | 1     |       | 0    |
| Taper Length (ft)   | 50    |      |       | 50    |       |      | 50    |      |       | 50    |       |      |
| Lane Util. Factor   | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 0.95 | 1.00  | 1.00  | 0.95  | 0.95 |
| Ped Bike Factor     |       |      |       |       | 0.99  |      |       |      | 0.97  |       |       |      |
| Frt                 |       |      | 0.850 |       | 0.915 |      |       |      | 0.850 |       | 0.997 |      |
| Flt Protected       | 0.950 |      |       | 0.950 |       |      | 0.950 |      |       | 0.950 |       |      |
| Satd. Flow (prot)   | 1770  | 1863 | 1583  | 1770  | 1691  | 0    | 1770  | 3539 | 1583  | 1770  | 3529  | 0    |
| Flt Permitted       | 0.661 |      |       | 0.643 |       |      | 0.170 |      |       | 0.469 |       |      |
| Satd. Flow (perm)   | 1231  | 1863 | 1583  | 1198  | 1691  | 0    | 317   | 3539 | 1543  | 874   | 3529  | 0    |
| Right Turn on Red   |       |      | Yes   |       |       | Yes  |       |      | Yes   |       |       | Yes  |
| Satd. Flow (RTOR)   |       |      | 401   |       | 77    |      |       |      | 183   |       | 2     |      |
| Link Speed (mph)    |       | 30   |       |       | 25    |      |       | 25   |       |       | 35    |      |
| Link Distance (ft)  |       | 622  |       |       | 252   |      |       | 846  |       |       | 464   |      |
| Travel Time (s)     |       | 14.1 |       |       | 6.9   |      |       | 23.1 |       |       | 9.0   |      |

Intersection Summary

Area Type: Other

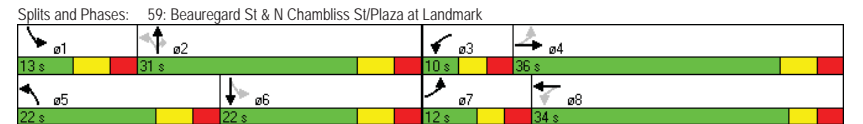
Timings  
59: Beauregard St & N Chambliss St/Plaza at Landmark

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBL   | EBT   | EBR  | WBL   | WBT   | NBL   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔    | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 135   | 85    | 465  | 250   | 60    | 420   | 465   | 170   | 80    | 795   |
| Turn Type            | pm+pt | NA    | Free | pm+pt | NA    | pm+pt | NA    | Perm  | pm+pt | NA    |
| Protected Phases     | 7     | 4     |      | 3     | 8     | 5     | 2     |       | 1     | 6     |
| Permitted Phases     | 4     |       | Free | 8     |       | 2     |       | 2     | 6     |       |
| Detector Phase       | 7     | 4     |      | 3     | 8     | 5     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |      |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   |      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 1.0   | 4.0   |
| Minimum Split (s)    | 10.0  | 36.0  |      | 10.0  | 22.0  | 12.0  | 22.0  | 22.0  | 12.0  | 22.0  |
| Total Split (s)      | 12.0  | 36.0  | 0.0  | 10.0  | 34.0  | 22.0  | 31.0  | 31.0  | 13.0  | 22.0  |
| Total Split (%)      | 13.3% | 40.0% | 0.0% | 11.1% | 37.8% | 24.4% | 34.4% | 34.4% | 14.4% | 24.4% |
| Yellow Time (s)      | 3.0   | 4.0   |      | 3.0   | 3.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 3.0   |      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | -5.0  |
| Total Lost Time (s)  | 6.0   | 7.0   | 4.0  | 6.0   | 6.0   | 7.0   | 7.0   | 7.0   | 7.0   | 2.0   |
| Lead/Lag             | Lead  | Lag   |      | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   |       |       |      |       |       |       |       |       |       |       |
| Recall Mode          | None  | None  |      | None  | None  | None  | Min   | Min   | None  | Min   |
| Act Effct Green (s)  | 15.2  | 9.7   | 70.9 | 14.5  | 8.8   | 37.1  | 26.9  | 26.9  | 20.6  | 20.0  |
| Actuated g/C Ratio   | 0.21  | 0.14  | 1.00 | 0.20  | 0.12  | 0.52  | 0.38  | 0.38  | 0.29  | 0.28  |
| v/c Ratio            | 0.47  | 0.36  | 0.32 | 0.90  | 0.55  | 0.95  | 0.37  | 0.26  | 0.26  | 0.87  |
| Control Delay        | 25.2  | 31.4  | 0.5  | 61.1  | 23.0  | 51.6  | 18.6  | 4.4   | 13.5  | 36.4  |
| Queue Delay          | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 25.2  | 31.4  | 0.5  | 61.1  | 23.0  | 51.6  | 18.6  | 4.4   | 13.5  | 36.4  |
| LOS                  | C     | C     | A    | E     | C     | D     | B     | A     | B     | D     |
| Approach Delay       |       | 9.2   |      |       | 47.4  |       | 29.4  |       |       | 34.3  |
| Approach LOS         |       | A     |      |       | D     |       | C     |       |       | C     |

Intersection Summary

Cycle Length: 90  
 Actuated Cycle Length: 70.9  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.95  
 Intersection Signal Delay: 28.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 84.0%  
 ICU Level of Service E  
 Analysis Period (min) 15



Phasings

59: Beauregard St & N Chambliss St/Plaza at Landmark

2020 Market with Traffic Mitigation

PM PEAK

| Lane Group              | EBL   | EBT   | EBR  | WBL   | WBT   | WBR | NBL   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|------|-------|-------|-----|-------|-------|-------|-------|-------|
| Protected Phases        | 7     | 4     |      | 3     | 8     |     | 5     | 2     |       | 1     | 6     |
| Permitted Phases        | 4     |       | Free | 8     |       |     | 2     |       | 2     | 6     |       |
| Minimum Initial (s)     | 4.0   | 4.0   |      | 4.0   | 4.0   |     | 4.0   | 4.0   | 4.0   | 1.0   | 4.0   |
| Minimum Split (s)       | 10.0  | 36.0  |      | 10.0  | 22.0  |     | 12.0  | 22.0  | 22.0  | 12.0  | 22.0  |
| Total Split (s)         | 12.0  | 36.0  | 0.0  | 10.0  | 34.0  |     | 22.0  | 31.0  | 31.0  | 13.0  | 22.0  |
| Total Split (%)         | 13.3% | 40.0% | 0.0% | 11.1% | 37.8% |     | 24.4% | 34.4% | 34.4% | 14.4% | 24.4% |
| Maximum Green (s)       | 6.0   | 29.0  |      | 4.0   | 28.0  |     | 15.0  | 24.0  | 24.0  | 6.0   | 15.0  |
| Yellow Time (s)         | 3.0   | 4.0   |      | 3.0   | 3.0   |     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 3.0   |      | 3.0   | 3.0   |     | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   |      | Lead  | Lag   |     | Lead  | Lag   | Lead  | Lag   |       |
| Lead-Lag Optimize?      |       |       |      |       |       |     |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   |      | 3.0   | 3.0   |     | 2.0   | 4.0   | 4.0   | 2.0   | 4.0   |
| Minimum Gap (s)         | 3.0   | 3.0   |      | 3.0   | 3.0   |     | 2.0   | 4.0   | 4.0   | 2.0   | 4.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   |      | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   |      | 0.0   | 0.0   |     | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  |      | None  | None  |     | Min   | Min   | None  | Min   |       |
| Walk Time (s)           |       | 7.0   |      |       | 5.0   |     |       |       |       |       |       |
| Flash Dont Walk (s)     |       | 22.0  |      |       | 11.0  |     |       |       |       |       |       |
| Pedestrian Calls (#/hr) |       | 0     |      |       | 0     |     |       |       |       |       |       |
| 90th %ile Green (s)     | 6.0   | 14.2  |      | 4.0   | 13.2  |     | 15.0  | 24.0  | 24.0  | 6.0   | 15.0  |
| 90th %ile Term Code     | Max   | Hold  |      | Max   | Gap   |     | Max   | Max   | Max   | Max   | Max   |
| 70th %ile Green (s)     | 6.0   | 11.4  |      | 4.0   | 10.4  |     | 15.0  | 24.0  | 24.0  | 6.0   | 15.0  |
| 70th %ile Term Code     | Max   | Hold  |      | Max   | Gap   |     | Max   | Hold  | Hold  | Max   | Max   |
| 50th %ile Green (s)     | 6.0   | 9.5   |      | 4.0   | 8.5   |     | 15.0  | 24.0  | 24.0  | 6.0   | 15.0  |
| 50th %ile Term Code     | Max   | Hold  |      | Max   | Gap   |     | Max   | Hold  | Hold  | Max   | Max   |
| 30th %ile Green (s)     | 6.0   | 7.8   |      | 4.0   | 6.8   |     | 15.0  | 24.5  | 24.5  | 5.5   | 15.0  |
| 30th %ile Term Code     | Max   | Hold  |      | Max   | Gap   |     | Max   | Hold  | Hold  | Gap   | Max   |
| 10th %ile Green (s)     | 6.0   | 0.0   |      | 17.5  | 5.5   |     | 15.0  | 37.0  | 37.0  | 0.0   | 15.0  |
| 10th %ile Term Code     | Max   | Skip  |      | Hold  | Gap   |     | Max   | Hold  | Hold  | Skip  | Max   |

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 70.9

Control Type: Actuated-Uncoordinated

90th %ile Actuated Cycle: 75.2

70th %ile Actuated Cycle: 72.4

50th %ile Actuated Cycle: 70.5

30th %ile Actuated Cycle: 68.8

10th %ile Actuated Cycle: 67.5

Lanes and Geometrics

61: N Beauregard St/Beauregard St & Route 236

2020 Market with Traffic Mitigation

PM PEAK

| Lane Group          | EBL   | EBT   | EBR  | WBL   | WBT  | WBR  | NBL   | NBT  | NBR   | SBL   | SBT   | SBR   |
|---------------------|-------|-------|------|-------|------|------|-------|------|-------|-------|-------|-------|
| Lane Configurations |       |       |      |       |      |      |       |      |       |       |       |       |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900 | 1900 | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12   | 12   | 12    | 12   | 12    | 12    | 12    | 12    |
| Grade (%)           |       | 0%    |      |       | 0%   |      |       | 0%   |       |       | 0%    |       |
| Storage Length (ft) | 600   |       | 0    | 215   |      | 500  | 120   |      | 0     | 0     |       | 0     |
| Storage Lanes       | 2     |       | 0    | 1     |      | 1    | 1     |      | 1     | 1     |       | 1     |
| Taper Length (ft)   | 50    |       |      | 50    |      |      | 50    |      |       | 50    |       |       |
| Lane Util. Factor   | 0.97  | 0.91  | 0.91 | 1.00  | 0.91 | 1.00 | 1.00  | 1.00 | 1.00  | 0.95  | 0.95  | 1.00  |
| Ped Bike Factor     |       | 1.00  |      |       |      |      | 0.98  |      | 0.98  |       |       | 0.97  |
| Frt                 |       | 0.994 |      |       |      |      | 0.850 |      | 0.850 |       |       | 0.850 |
| Flt Protected       | 0.950 |       |      | 0.950 |      |      | 0.950 |      |       | 0.950 | 0.964 |       |
| Satd. Flow (prot)   | 3433  | 5044  | 0    | 1770  | 5085 | 1583 | 1770  | 1863 | 1583  | 1681  | 1706  | 1583  |
| Flt Permitted       | 0.950 |       |      | 0.950 |      |      | 0.950 |      |       | 0.950 | 0.964 |       |
| Satd. Flow (perm)   | 3433  | 5044  | 0    | 1770  | 5085 | 1552 | 1770  | 1863 | 1550  | 1681  | 1706  | 1543  |
| Right Turn on Red   |       |       | Yes  |       |      | Yes  |       |      | Yes   |       |       | Yes   |
| Satd. Flow (RTOR)   |       | 4     |      |       |      |      | 331   |      |       | 12    |       | 356   |
| Link Speed (mph)    |       | 40    |      |       | 40   |      |       |      | 25    |       |       | 25    |
| Link Distance (ft)  |       | 1126  |      |       | 1020 |      |       |      | 665   |       |       | 846   |
| Travel Time (s)     |       | 19.2  |      |       | 17.4 |      |       |      | 18.1  |       |       | 23.1  |

Intersection Summary

Area Type: Other

Timings

61: N Beauregard St/Beauregard St & Route 236

2020 Market with Traffic Mitigation

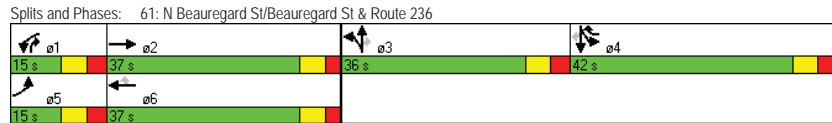
PM PEAK



| Lane Group           | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔↔    | ↔↔    | ↔↔    | ↔↔    | ↔↔    | ↔↔    | ↔↔    | ↔↔    | ↔↔    | ↔↔    | ↔↔    |
| Volume (vph)         | 280   | 880   | 100   | 1170  | 620   | 130   | 155   | 110   | 865   | 125   | 520   |
| Turn Type            | Prot  | NA    | Prot  | NA    | pm+ov | Split | NA    | pm+ov | Split | NA    | Perm  |
| Protected Phases     | 5     | 2     | 1     | 6     | 4     | 3     | 3     | 1     | 4     | 4     |       |
| Permitted Phases     |       |       |       |       | 6     |       |       | 3     |       |       | 4     |
| Detector Phase       | 5     | 2     | 1     | 6     | 4     | 3     | 3     | 1     | 4     | 4     | 4     |
| Switch Phase         |       |       |       |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 8.0   | 20.0  | 8.0   | 20.0  | 8.0   | 4.0   | 4.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)    | 15.0  | 26.5  | 15.0  | 28.5  | 36.0  | 36.0  | 36.0  | 15.0  | 36.0  | 36.0  | 36.0  |
| Total Split (s)      | 15.0  | 37.0  | 15.0  | 37.0  | 42.0  | 36.0  | 36.0  | 15.0  | 42.0  | 42.0  | 42.0  |
| Total Split (%)      | 11.5% | 28.5% | 11.5% | 28.5% | 32.3% | 27.7% | 27.7% | 11.5% | 32.3% | 32.3% | 32.3% |
| Yellow Time (s)      | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)     | 3.0   | 2.5   | 3.0   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lost Time Adjust (s) | -3.0  | -2.5  | -3.0  | -2.5  | -3.0  | -3.0  | -3.0  | -3.0  | -5.0  | -5.0  | -5.0  |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag             | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lead  | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?   |       |       |       |       |       |       |       |       |       |       |       |
| Recall Mode          | None  | Min   | None  | Min   | None  | None  | None  | None  | None  | None  | None  |
| Act Effct Green (s)  | 11.0  | 33.1  | 11.0  | 33.1  | 71.1  | 18.9  | 18.9  | 29.9  | 40.1  | 40.1  | 40.1  |
| Actuated g/C Ratio   | 0.09  | 0.28  | 0.09  | 0.28  | 0.61  | 0.16  | 0.16  | 0.26  | 0.34  | 0.34  | 0.34  |
| v/c Ratio            | 0.93  | 0.69  | 0.65  | 0.88  | 0.62  | 0.49  | 0.56  | 0.29  | 0.92  | 0.91  | 0.73  |
| Control Delay        | 88.7  | 40.7  | 70.8  | 48.5  | 6.4   | 50.5  | 52.4  | 17.4  | 60.6  | 59.4  | 18.6  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 88.7  | 40.7  | 70.8  | 48.5  | 6.4   | 50.5  | 52.4  | 17.4  | 60.6  | 59.4  | 18.6  |
| LOS                  | F     | D     | E     | D     | A     | D     | D     | B     | E     | E     | B     |
| Approach Delay       |       | 51.9  |       | 35.9  |       |       | 42.0  |       |       | 45.8  |       |
| Approach LOS         |       | D     |       | D     |       |       | D     |       |       | D     |       |

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 117  
 Natural Cycle: 130  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.93  
 Intersection Signal Delay: 43.2  
 Intersection LOS: D  
 Intersection Capacity Utilization 82.7%  
 ICU Level of Service E  
 Analysis Period (min) 15



Phasings

61: N Beauregard St/Beauregard St & Route 236

2020 Market with Traffic Mitigation

PM PEAK




| Lane Group              | EBL   | EBT   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 5     | 2     | 1     | 6     | 4     | 3     | 3     | 1     | 4     | 4     |       |
| Permitted Phases        |       |       |       |       | 6     |       |       | 3     |       |       | 4     |
| Minimum Initial (s)     | 8.0   | 20.0  | 8.0   | 20.0  | 8.0   | 4.0   | 4.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| Minimum Split (s)       | 15.0  | 26.5  | 15.0  | 28.5  | 36.0  | 36.0  | 36.0  | 15.0  | 36.0  | 36.0  | 36.0  |
| Total Split (s)         | 15.0  | 37.0  | 15.0  | 37.0  | 42.0  | 36.0  | 36.0  | 15.0  | 42.0  | 42.0  | 42.0  |
| Total Split (%)         | 11.5% | 28.5% | 11.5% | 28.5% | 32.3% | 27.7% | 27.7% | 11.5% | 32.3% | 32.3% | 32.3% |
| Maximum Green (s)       | 8.0   | 30.5  | 8.0   | 30.5  | 35.0  | 29.0  | 29.0  | 8.0   | 35.0  | 35.0  | 35.0  |
| Yellow Time (s)         | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| All-Red Time (s)        | 3.0   | 2.5   | 3.0   | 2.5   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Lead/Lag                | Lead  | Lag   | Lead  | Lag   | Lag   | Lead  | Lead  | Lead  | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   | 3.0   | 2.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | Min   | None  | Min   | None  | None  | None  | None  | None  | None  | None  |
| Walk Time (s)           |       |       |       | 7.0   | 7.0   | 7.0   | 7.0   |       | 7.0   | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |       |       | 14.0  | 22.0  | 22.0  | 22.0  |       | 22.0  | 22.0  | 22.0  |
| Pedestrian Calls (#/hr) |       |       |       | 0     | 0     | 0     | 0     |       | 0     | 0     | 0     |
| 90th %ile Green (s)     | 8.0   | 30.5  | 8.0   | 30.5  | 35.0  | 22.8  | 22.8  | 8.0   | 35.0  | 35.0  | 35.0  |
| 90th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Gap   | Gap   | Max   | Max   | Max   | Max   |
| 70th %ile Green (s)     | 8.0   | 30.5  | 8.0   | 30.5  | 35.0  | 18.1  | 18.1  | 8.0   | 35.0  | 35.0  | 35.0  |
| 70th %ile Term Code     | Max   | Max   | Max   | Max   | Max   | Gap   | Gap   | Max   | Max   | Max   | Max   |
| 50th %ile Green (s)     | 8.0   | 30.5  | 8.0   | 30.5  | 35.0  | 15.6  | 15.6  | 8.0   | 35.0  | 35.0  | 35.0  |
| 50th %ile Term Code     | Max   | Hold  | Max   | Max   | Max   | Gap   | Gap   | Max   | Max   | Max   | Max   |
| 30th %ile Green (s)     | 8.0   | 30.5  | 8.0   | 30.5  | 35.0  | 13.3  | 13.3  | 8.0   | 35.0  | 35.0  | 35.0  |
| 30th %ile Term Code     | Max   | Hold  | Max   | Max   | Max   | Gap   | Gap   | Max   | Max   | Max   | Max   |
| 10th %ile Green (s)     | 8.0   | 30.5  | 8.0   | 30.5  | 35.0  | 10.1  | 10.1  | 8.0   | 35.0  | 35.0  | 35.0  |
| 10th %ile Term Code     | Max   | Hold  | Max   | Max   | Max   | Gap   | Gap   | Max   | Max   | Max   | Max   |

Intersection Summary

Cycle Length: 130  
 Actuated Cycle Length: 117  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 123.8  
 70th %ile Actuated Cycle: 119.1  
 50th %ile Actuated Cycle: 116.6  
 30th %ile Actuated Cycle: 114.3  
 10th %ile Actuated Cycle: 111.1

Lanes and Geometrics  
67: Beauregard St & Lincolia Rd Spur

2020 Market with Traffic Mitigation  
PM PEAK



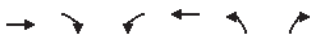
| Lane Group          | EBL  | EBT  | WBT   | WBR  | SBL  | SBR  |
|---------------------|------|------|-------|------|------|------|
| Lane Configurations |      | ↑↑   | ↑↑    |      |      |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900  | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12    | 12   | 12   | 12   |
| Grade (%)           |      | 0%   | 0%    |      | 0%   |      |
| Storage Length (ft) | 0    |      |       | 0    | 0    | 0    |
| Storage Lanes       | 0    |      |       | 0    | 0    | 0    |
| Taper Length (ft)   | 50   |      |       |      | 50   |      |
| Lane Util. Factor   | 1.00 | 0.95 | 0.95  | 0.95 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      |       |      |      |      |
| Frt                 |      |      | 0.956 |      |      |      |
| Flt Protected       |      |      |       |      |      |      |
| Satd. Flow (prot)   | 0    | 3539 | 3383  | 0    | 0    | 0    |
| Flt Permitted       |      |      |       |      |      |      |
| Satd. Flow (perm)   | 0    | 3539 | 3383  | 0    | 0    | 0    |
| Link Speed (mph)    |      | 35   | 35    |      | 25   |      |
| Link Distance (ft)  |      | 464  | 545   |      | 446  |      |
| Travel Time (s)     |      | 9.0  | 10.6  |      | 12.2 |      |

Intersection Summary

Area Type: Other

Lanes and Geometrics  
90: N Jordan St & Seminary Rd/ Seminary Rd

2020 Market with Traffic Mitigation  
PM PEAK



| Lane Group          | EBT   | EBR  | WBL  | WBT   | NBL   | NBR   |
|---------------------|-------|------|------|-------|-------|-------|
| Lane Configurations | ↑↑    |      |      | ↑↑    | ↑↑    | ↑↑    |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900  | 1900  |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12    | 12    |
| Grade (%)           | 0%    |      |      | 0%    | 0%    |       |
| Storage Length (ft) |       | 0    | 0    |       | 0     | 250   |
| Storage Lanes       |       | 0    | 0    |       | 1     | 1     |
| Taper Length (ft)   |       |      | 50   |       | 50    |       |
| Lane Util. Factor   | 0.95  | 0.95 | 0.95 | 0.95  | 1.00  | 1.00  |
| Ped Bike Factor     |       |      |      |       |       |       |
| Frt                 | 0.965 |      |      |       |       | 0.850 |
| Flt Protected       |       |      |      | 0.997 | 0.950 |       |
| Satd. Flow (prot)   | 3379  | 0    | 0    | 3529  | 1770  | 1583  |
| Flt Permitted       |       |      |      | 0.633 | 0.950 |       |
| Satd. Flow (perm)   | 3379  | 0    | 0    | 2240  | 1770  | 1583  |
| Right Turn on Red   |       | Yes  |      |       |       | Yes   |
| Satd. Flow (RTOR)   | 52    |      |      |       |       | 22    |
| Link Speed (mph)    | 35    |      |      | 35    | 25    |       |
| Link Distance (ft)  | 744   |      |      | 747   | 1357  |       |
| Travel Time (s)     | 14.5  |      |      | 14.6  | 37.0  |       |

Intersection Summary

Area Type: Other

Timings  
90: N Jordan St & Seminary Rd/ Seminary Rd

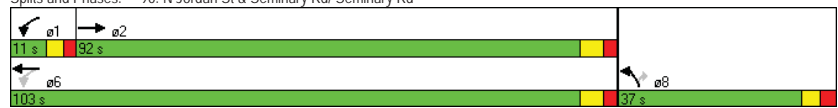
2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBT   | WBL   | WBT   | NBL   | NBR   |
|----------------------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     | ↔     |
| Volume (vph)         | 1130  | 65    | 935   | 230   | 20    |
| Turn Type            | NA    | pm+pt | NA    | NA    | Perm  |
| Protected Phases     | 2     | 1     | 6     | 8     |       |
| Permitted Phases     |       | 6     |       |       | 8     |
| Detector Phase       | 2     | 1     | 6     | 8     | 8     |
| Switch Phase         |       |       |       |       |       |
| Minimum Initial (s)  | 10.0  | 6.0   | 16.0  | 6.0   | 6.0   |
| Minimum Split (s)    | 30.5  | 11.0  | 30.5  | 22.0  | 22.0  |
| Total Split (s)      | 92.0  | 11.0  | 103.0 | 37.0  | 37.0  |
| Total Split (%)      | 65.7% | 7.9%  | 73.6% | 26.4% | 26.4% |
| Yellow Time (s)      | 4.0   | 3.0   | 4.0   | 3.0   | 3.0   |
| All-Red Time (s)     | 2.5   | 2.0   | 2.5   | 3.0   | 3.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 6.5   | 5.0   | 6.5   | 6.0   | 6.0   |
| Lead/Lag             | Lag   | Lead  |       |       |       |
| Lead-Lag Optimize?   |       |       |       |       |       |
| Recall Mode          | C-Max | None  | C-Max | None  | None  |
| Act Effct Green (s)  | 103.1 |       | 103.1 | 24.4  | 24.4  |
| Actuated g/C Ratio   | 0.74  |       | 0.74  | 0.17  | 0.17  |
| v/c Ratio            | 0.63  |       | 0.65  | 0.80  | 0.07  |
| Control Delay        | 13.4  |       | 12.5  | 74.2  | 16.1  |
| Queue Delay          | 6.3   |       | 0.0   | 0.0   | 0.0   |
| Total Delay          | 19.7  |       | 12.5  | 74.2  | 16.1  |
| LOS                  | B     |       | B     | E     | B     |
| Approach Delay       | 19.7  |       | 12.5  | 69.5  |       |
| Approach LOS         | B     |       | B     | E     |       |

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 47 (34%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.80  
 Intersection Signal Delay: 21.6  
 Intersection LOS: C  
 Intersection Capacity Utilization 98.2%  
 ICU Level of Service F  
 Analysis Period (min) 15

Splits and Phases: 90: N Jordan St & Seminary Rd/ Seminary Rd



Phasings  
90: N Jordan St & Seminary Rd/ Seminary Rd

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBT   | WBL  | WBT   | NBL   | NBR   |
|-------------------------|-------|------|-------|-------|-------|
| Protected Phases        | 2     | 1    | 6     | 8     |       |
| Permitted Phases        |       | 6    |       |       | 8     |
| Minimum Initial (s)     | 10.0  | 6.0  | 16.0  | 6.0   | 6.0   |
| Minimum Split (s)       | 30.5  | 11.0 | 30.5  | 22.0  | 22.0  |
| Total Split (s)         | 92.0  | 11.0 | 103.0 | 37.0  | 37.0  |
| Total Split (%)         | 65.7% | 7.9% | 73.6% | 26.4% | 26.4% |
| Maximum Green (s)       | 85.5  | 6.0  | 96.5  | 31.0  | 31.0  |
| Yellow Time (s)         | 4.0   | 3.0  | 4.0   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.5   | 2.0  | 2.5   | 3.0   | 3.0   |
| Lead/Lag                | Lag   | Lead |       |       |       |
| Lead-Lag Optimize?      |       |      |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0  | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0  | 0.0   | 0.0   | 0.0   |
| Recall Mode             | C-Max | None | C-Max | None  | None  |
| Walk Time (s)           | 12.0  |      | 12.0  | 4.0   | 4.0   |
| Flash Dont Walk (s)     | 12.0  |      | 12.0  | 12.0  | 12.0  |
| Pedestrian Calls (#/hr) | 0     |      | 0     | 0     | 0     |
| 90th %ile Green (s)     | 96.5  | 0.0  | 96.5  | 31.0  | 31.0  |
| 90th %ile Term Code     | Coord | Skip | Coord | Max   | Max   |
| 70th %ile Green (s)     | 99.6  | 0.0  | 99.6  | 27.9  | 27.9  |
| 70th %ile Term Code     | Coord | Skip | Coord | Gap   | Gap   |
| 50th %ile Green (s)     | 102.8 | 0.0  | 102.8 | 24.7  | 24.7  |
| 50th %ile Term Code     | Coord | Skip | Coord | Gap   | Gap   |
| 30th %ile Green (s)     | 106.0 | 0.0  | 106.0 | 21.5  | 21.5  |
| 30th %ile Term Code     | Coord | Skip | Coord | Gap   | Gap   |
| 10th %ile Green (s)     | 110.7 | 0.0  | 110.7 | 16.8  | 16.8  |
| 10th %ile Term Code     | Coord | Skip | Coord | Gap   | Gap   |

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 47 (34%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow  
 Control Type: Actuated-Coordinated

Lanes and Geometrics 2020 Market with Traffic Mitigation  
PM PEAK  
93: Hammond M.S./Encore Apts & Seminary Rd

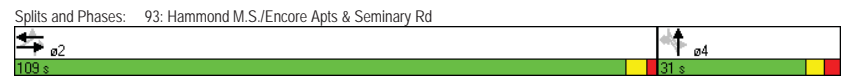
| Lane Group          | EBL   | EBT  | EBR  | WBL  | WBT   | WBR  | NBL  | NBT   | NBR   | SBL   | SBT  | SBR   |
|---------------------|-------|------|------|------|-------|------|------|-------|-------|-------|------|-------|
| Lane Configurations | ↔     | ↔↔↔  |      | ↔    | ↔↔    |      |      | ↔     | ↔     | ↔     | ↔    | ↔     |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900 | 1900  | 1900 | 1900 | 1900  | 1900  | 1900  | 1900 | 1900  |
| Lane Width (ft)     | 12    | 12   | 12   | 12   | 12    | 12   | 12   | 12    | 12    | 12    | 12   | 12    |
| Grade (%)           |       | 0%   |      |      | 0%    |      |      | 0%    |       |       | 0%   |       |
| Storage Length (ft) | 100   |      | 0    | 0    |       | 0    | 0    |       | 0     | 0     |      | 0     |
| Storage Lanes       | 1     |      | 0    | 0    |       | 0    | 0    |       | 1     | 1     |      | 1     |
| Taper Length (ft)   | 50    |      |      | 50   |       |      | 50   |       |       | 50    |      |       |
| Lane Util. Factor   | 1.00  | 0.91 | 1.00 | 1.00 | 0.95  | 0.95 | 1.00 | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  |
| Ped Bike Factor     |       |      |      |      | 0.995 |      |      |       | 0.850 |       |      | 0.850 |
| Frt Protected       | 0.950 |      |      |      |       |      |      | 0.950 |       | 0.950 |      |       |
| Satd. Flow (prot)   | 1770  | 5085 | 0    | 0    | 3522  | 0    | 0    | 1770  | 1583  | 1770  | 0    | 1583  |
| Frt Permitted       | 0.232 |      |      |      |       |      |      | 0.950 |       |       |      |       |
| Satd. Flow (perm)   | 432   | 5085 | 0    | 0    | 3522  | 0    | 0    | 1770  | 1583  | 1863  | 0    | 1583  |
| Right Turn on Red   |       |      | Yes  |      |       | Yes  |      |       | Yes   |       |      | Yes   |
| Satd. Flow (RTOR)   |       |      |      |      | 6     |      |      |       | 5     |       |      | 16    |
| Link Speed (mph)    |       | 35   |      |      |       | 35   |      |       | 25    |       |      | 25    |
| Link Distance (ft)  |       | 464  |      |      | 317   |      |      | 257   |       |       |      | 372   |
| Travel Time (s)     |       | 9.0  |      |      | 6.2   |      |      | 7.0   |       |       |      | 10.1  |

**Intersection Summary**  
Area Type: Other

Timings 2020 Market with Traffic Mitigation  
PM PEAK  
93: Hammond M.S./Encore Apts & Seminary Rd

| Lane Group           | EBL   | EBT   | WBT   | NBT   | NBR    | SBL   | SBR    |
|----------------------|-------|-------|-------|-------|--------|-------|--------|
| Lane Configurations  | ↔     | ↔↔↔   | ↔↔    | ↔     | ↔      | ↔     | ↔      |
| Volume (vph)         | 45    | 1540  | 1070  | 0     | 5      | 5     | 15     |
| Turn Type            | Perm  | NA    | NA    | NA    | custom | D.Pm  | custom |
| Protected Phases     |       | 2     | 2     | 4     |        |       |        |
| Permitted Phases     | 2     |       |       |       | 2      | 4     | 4      |
| Detector Phase       | 2     | 2     | 2     | 4     | 2      | 4     | 4      |
| Switch Phase         |       |       |       |       |        |       |        |
| Minimum Initial (s)  | 10.0  | 10.0  | 10.0  | 6.0   | 10.0   | 6.0   | 6.0    |
| Minimum Split (s)    | 21.5  | 21.5  | 21.5  | 29.0  | 21.5   | 29.0  | 29.0   |
| Total Split (s)      | 109.0 | 109.0 | 109.0 | 31.0  | 109.0  | 31.0  | 31.0   |
| Total Split (%)      | 77.9% | 77.9% | 77.9% | 22.1% | 77.9%  | 22.1% | 22.1%  |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5   | 3.0   | 3.5    | 3.0   | 3.0    |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 3.0   | 2.0    | 3.0   | 3.0    |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0    | 0.0   | 0.0    |
| Total Lost Time (s)  | 5.5   | 5.5   | 5.5   | 6.0   | 5.5    | 6.0   | 6.0    |
| Lead/Lag             |       |       |       |       |        |       |        |
| Lead-Lag Optimize?   |       |       |       |       |        |       |        |
| Recall Mode          | C-Max | C-Max | C-Max | None  | C-Max  | None  | None   |
| Act Effct Green (s)  | 129.1 | 129.1 | 129.1 | 6.4   | 129.1  | 6.4   | 6.4    |
| Actuated g/C Ratio   | 0.92  | 0.92  | 0.92  | 0.05  | 0.92   | 0.05  | 0.05   |
| v/c Ratio            | 0.12  | 0.35  | 0.37  | 0.06  | 0.00   | 0.06  | 0.18   |
| Control Delay        | 1.5   | 1.0   | 0.5   | 65.0  | 0.8    | 64.8  | 30.7   |
| Queue Delay          | 0.0   | 0.1   | 0.4   | 0.0   | 0.0    | 0.0   | 0.0    |
| Total Delay          | 1.5   | 1.1   | 0.8   | 65.0  | 0.8    | 64.8  | 30.7   |
| LOS                  | A     | A     | A     | E     | A      | E     | C      |
| Approach Delay       |       | 1.2   | 0.8   | 32.9  |        |       |        |
| Approach LOS         |       | A     | A     | C     |        |       |        |

**Intersection Summary**  
Cycle Length: 140  
Actuated Cycle Length: 140  
Offset: 0 (0%), Referenced to phase 2:WBEB, Start of Yellow  
Natural Cycle: 60  
Control Type: Actuated-Coordinated  
Maximum v/c Ratio: 0.37  
Intersection Signal Delay: 1.4 Intersection LOS: A  
Intersection Capacity Utilization 55.3% ICU Level of Service B  
Analysis Period (min) 15



Phasings

93: Hammond M.S./Encore Apts & Seminary Rd

2020 Market with Traffic Mitigation

PM PEAK

| Lane Group              | EBL   | EBT   | WBT   | NBT   | NBR   | SBL   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|
| Protected Phases        |       | 2     | 2     | 4     |       |       |       |
| Permitted Phases        | 2     |       |       |       | 2     | 4     | 4     |
| Minimum Initial (s)     | 10.0  | 10.0  | 10.0  | 6.0   | 10.0  | 6.0   | 6.0   |
| Minimum Split (s)       | 21.5  | 21.5  | 21.5  | 29.0  | 21.5  | 29.0  | 29.0  |
| Total Split (s)         | 109.0 | 109.0 | 109.0 | 31.0  | 109.0 | 31.0  | 31.0  |
| Total Split (%)         | 77.9% | 77.9% | 77.9% | 22.1% | 77.9% | 22.1% | 22.1% |
| Maximum Green (s)       | 103.5 | 103.5 | 103.5 | 25.0  | 103.5 | 25.0  | 25.0  |
| Yellow Time (s)         | 3.5   | 3.5   | 3.5   | 3.0   | 3.5   | 3.0   | 3.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 3.0   | 2.0   | 3.0   | 3.0   |
| Lead/Lag                |       |       |       |       |       |       |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | C-Max | C-Max | C-Max | None  | C-Max | None  | None  |
| Walk Time (s)           |       |       |       | 7.0   |       | 7.0   | 7.0   |
| Flash Dont Walk (s)     |       |       |       | 16.0  |       | 16.0  | 16.0  |
| Pedestrian Calls (#/hr) |       |       |       | 0     |       | 0     | 0     |
| 90th %ile Green (s)     | 120.8 | 120.8 | 120.8 | 7.7   | 120.8 | 7.7   | 7.7   |
| 90th %ile Term Code     | Coord | Coord | Coord | Gap   | Coord | Gap   | Gap   |
| 70th %ile Green (s)     | 122.0 | 122.0 | 122.0 | 6.5   | 122.0 | 6.5   | 6.5   |
| 70th %ile Term Code     | Coord | Coord | Coord | Gap   | Coord | Gap   | Gap   |
| 50th %ile Green (s)     | 122.5 | 122.5 | 122.5 | 6.0   | 122.5 | 6.0   | 6.0   |
| 50th %ile Term Code     | Coord | Coord | Coord | Min   | Coord | Min   | Min   |
| 30th %ile Green (s)     | 134.5 | 134.5 | 134.5 | 0.0   | 134.5 | 0.0   | 0.0   |
| 30th %ile Term Code     | Coord | Coord | Coord | Skip  | Coord | Skip  | Skip  |
| 10th %ile Green (s)     | 134.5 | 134.5 | 134.5 | 0.0   | 134.5 | 0.0   | 0.0   |
| 10th %ile Term Code     | Coord | Coord | Coord | Skip  | Coord | Skip  | Skip  |

Intersection Summary

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 0 (0%), Referenced to phase 2-WBEB, Start of Yellow  
 Control Type: Actuated-Coordinated

Lanes and Geometrics

100: South HOV Ramp & Seminary Rd

2020 Market with Traffic Mitigation

PM PEAK

| Lane Group          | EBT   | EBR  | WBL  | WBT   | NBL  | NBR  |
|---------------------|-------|------|------|-------|------|------|
| Lane Configurations | ↑↑    |      |      | ↑↑    | ↑↑   |      |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900 | 1900  | 1900 | 1900 |
| Lane Width (ft)     | 12    | 12   | 12   | 12    | 12   | 12   |
| Grade (%)           | 0%    |      |      | 0%    | 0%   |      |
| Storage Length (ft) |       | 0    | 0    |       | 0    | 0    |
| Storage Lanes       |       | 0    | 0    |       | 1    | 0    |
| Taper Length (ft)   |       |      | 50   |       | 50   |      |
| Lane Util. Factor   | 0.95  | 0.95 | 0.95 | 0.95  | 1.00 | 1.00 |
| Ped Bike Factor     |       |      |      |       |      |      |
| Frt                 | 0.945 |      |      |       |      |      |
| Flt Protected       |       |      |      | 0.986 |      |      |
| Satd. Flow (prot)   | 3345  | 0    | 0    | 3490  | 1863 | 0    |
| Flt Permitted       |       |      |      | 0.492 |      |      |
| Satd. Flow (perm)   | 3345  | 0    | 0    | 1741  | 1863 | 0    |
| Right Turn on Red   |       | Yes  |      |       |      | Yes  |
| Satd. Flow (RTOR)   | 345   |      |      |       |      |      |
| Link Speed (mph)    | 35    |      |      | 35    | 30   |      |
| Link Distance (ft)  | 824   |      |      | 403   | 671  |      |
| Travel Time (s)     | 16.1  |      |      | 7.9   | 15.3 |      |

Intersection Summary

Area Type: Other



**Timings**  
**100: South HOV Ramp & Seminary Rd**

2020 Market with Traffic Mitigation  
 PM PEAK

| Lane Group           | EBT   | WBL   | WBT    | ø2   |
|----------------------|-------|-------|--------|------|
| Lane Configurations  | ↑↑    |       | ↑↑     |      |
| Volume (vph)         | 880   | 300   | 735    |      |
| Turn Type            | NA    | Perm  | NA     |      |
| Protected Phases     | 4     |       | 8      | 2    |
| Permitted Phases     |       | 8     |        |      |
| Detector Phase       | 4     | 8     | 8      |      |
| Switch Phase         |       |       |        |      |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0    | 4.0  |
| Minimum Split (s)    | 20.0  | 20.0  | 20.0   | 20.0 |
| Total Split (s)      | 120.0 | 120.0 | 120.0  | 20.0 |
| Total Split (%)      | 85.7% | 85.7% | 85.7%  | 14%  |
| Yellow Time (s)      | 3.5   | 3.5   | 3.5    | 3.5  |
| All-Red Time (s)     | 0.5   | 0.5   | 0.5    | 0.5  |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0    |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0    |      |
| Lead/Lag             |       |       |        |      |
| Lead-Lag Optimize?   |       |       |        |      |
| Recall Mode          | C-Max | C-Max | C-Max  | Max  |
| Act Effct Green (s)  | 116.0 |       | 116.0  |      |
| Actuated g/C Ratio   | 0.83  |       | 0.83   |      |
| v/c Ratio            | 0.53  |       | 1.38dl |      |
| Control Delay        | 1.7   |       | 16.6   |      |
| Queue Delay          | 0.0   |       | 0.0    |      |
| Total Delay          | 1.7   |       | 16.6   |      |
| LOS                  | A     |       | B      |      |
| Approach Delay       | 1.7   |       | 16.6   |      |
| Approach LOS         | A     |       | B      |      |

**Intersection Summary**

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 65 (46%), Referenced to phase 4:EBT and 8:WBT, Start of Green  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 8.1  
 Intersection LOS: A  
 Intersection Capacity Utilization 76.4%  
 ICU Level of Service D  
 Analysis Period (min) 15  
 dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 100: South HOV Ramp & Seminary Rd



**Phasings**  
**100: South HOV Ramp & Seminary Rd**

2020 Market with Traffic Mitigation  
 PM PEAK

| Lane Group              | EBT   | WBL   | WBT   | ø2   |
|-------------------------|-------|-------|-------|------|
| Protected Phases        | 4     |       | 8     | 2    |
| Permitted Phases        |       | 8     |       |      |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0  |
| Minimum Split (s)       | 20.0  | 20.0  | 20.0  | 20.0 |
| Total Split (s)         | 120.0 | 120.0 | 120.0 | 20.0 |
| Total Split (%)         | 85.7% | 85.7% | 85.7% | 14%  |
| Maximum Green (s)       | 116.0 | 116.0 | 116.0 | 16.0 |
| Yellow Time (s)         | 3.5   | 3.5   | 3.5   | 3.5  |
| All-Red Time (s)        | 0.5   | 0.5   | 0.5   | 0.5  |
| Lead/Lag                |       |       |       |      |
| Lead-Lag Optimize?      |       |       |       |      |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0  |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0  |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0  |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0  |
| Recall Mode             | C-Max | C-Max | C-Max | Max  |
| Walk Time (s)           | 5.0   | 5.0   | 5.0   | 5.0  |
| Flash Dont Walk (s)     | 11.0  | 11.0  | 11.0  | 11.0 |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0    |
| 90th %ile Green (s)     | 116.0 | 116.0 | 116.0 | 16.0 |
| 90th %ile Term Code     | Coord | Coord | Coord | MaxR |
| 70th %ile Green (s)     | 116.0 | 116.0 | 116.0 | 16.0 |
| 70th %ile Term Code     | Coord | Coord | Coord | MaxR |
| 50th %ile Green (s)     | 116.0 | 116.0 | 116.0 | 16.0 |
| 50th %ile Term Code     | Coord | Coord | Coord | MaxR |
| 30th %ile Green (s)     | 116.0 | 116.0 | 116.0 | 16.0 |
| 30th %ile Term Code     | Coord | Coord | Coord | MaxR |
| 10th %ile Green (s)     | 116.0 | 116.0 | 116.0 | 16.0 |
| 10th %ile Term Code     | Coord | Coord | Coord | MaxR |

**Intersection Summary**

Cycle Length: 140  
 Actuated Cycle Length: 140  
 Offset: 65 (46%), Referenced to phase 4:EBT and 8:WBT, Start of Green  
 Control Type: Actuated-Coordinated

Lanes and Geometrics  
106: Seminary Rd (N) & North HOV Ramp

2020 Market with Traffic Mitigation  
PM PEAK



| Lane Group          | EBL  | EBT  | WBT  | WBR  | SBL   | SBR  |
|---------------------|------|------|------|------|-------|------|
| Lane Configurations |      |      | ↑↑↑  |      |       | ↑    |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12   | 12   | 12   | 12   | 12    | 12   |
| Grade (%)           |      | 0%   | 0%   |      | 0%    |      |
| Storage Length (ft) | 0    |      |      | 0    | 0     | 0    |
| Storage Lanes       | 0    |      |      | 0    | 0     | 1    |
| Taper Length (ft)   | 50   |      |      |      | 50    |      |
| Lane Util. Factor   | 1.00 | 1.00 | 0.91 | 0.91 | 1.00  | 1.00 |
| Ped Bike Factor     |      |      |      |      |       |      |
| Frt                 |      |      |      |      | 0.865 |      |
| Flt Protected       |      |      |      |      |       |      |
| Satd. Flow (prot)   | 0    | 0    | 5085 | 0    | 0     | 1611 |
| Flt Permitted       |      |      |      |      |       |      |
| Satd. Flow (perm)   | 0    | 0    | 5085 | 0    | 0     | 1611 |
| Link Speed (mph)    |      | 35   | 35   |      | 30    |      |
| Link Distance (ft)  |      | 149  | 130  |      | 585   |      |
| Travel Time (s)     |      | 2.9  | 2.5  |      | 13.3  |      |

Intersection Summary

Area Type: Other

Lanes and Geometrics  
111: Van Dorn St & Library Ln Ext

2020 Market with Traffic Mitigation  
PM PEAK



| Lane Group          | WBL   | WBR   | NBT  | NBR   | SBL   | SBT  |
|---------------------|-------|-------|------|-------|-------|------|
| Lane Configurations | ↓     | ↓     | ↑↑   | ↓     | ↓     | ↑↑   |
| Ideal Flow (vphpl)  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12    | 12   | 12    | 12    | 12   |
| Grade (%)           | 0%    |       | 0%   |       |       | 0%   |
| Storage Length (ft) | 100   | 0     |      | 250   | 100   |      |
| Storage Lanes       | 1     | 1     |      | 1     | 1     |      |
| Taper Length (ft)   | 50    |       |      |       | 50    |      |
| Lane Util. Factor   | 1.00  | 1.00  | 0.95 | 1.00  | 1.00  | 0.95 |
| Ped Bike Factor     |       |       |      |       |       |      |
| Frt                 |       | 0.850 |      | 0.850 |       |      |
| Flt Protected       | 0.950 |       |      |       | 0.950 |      |
| Satd. Flow (prot)   | 1770  | 1583  | 3539 | 1583  | 1770  | 3539 |
| Flt Permitted       | 0.950 |       |      |       | 0.413 |      |
| Satd. Flow (perm)   | 1770  | 1583  | 3539 | 1583  | 769   | 3539 |
| Right Turn on Red   |       | Yes   |      | Yes   |       |      |
| Satd. Flow (RTOR)   |       | 11    |      | 59    |       |      |
| Link Speed (mph)    | 35    |       | 35   |       | 35    |      |
| Link Distance (ft)  | 665   |       | 1898 |       | 652   |      |
| Travel Time (s)     | 13.0  |       | 37.0 |       | 12.7  |      |

Intersection Summary

Area Type: Other

**Timings**  
**111: Van Dorn St & Library Ln Ext**

2020 Market with Traffic Mitigation  
 PM PEAK

| Lane Group           | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | ↔     | ↔     | ↑     | ↔     | ↔     | ↑     |
| Volume (vph)         | 135   | 10    | 515   | 55    | 150   | 1460  |
| Turn Type            | NA    | Perm  | NA    | Perm  | pm+pt | NA    |
| Protected Phases     | 8     |       | 2     |       | 1     | 6     |
| Permitted Phases     |       | 8     |       | 2     | 6     |       |
| Detector Phase       | 8     | 8     | 2     | 2     | 1     | 6     |
| Switch Phase         |       |       |       |       |       |       |
| Minimum Initial (s)  | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)    | 21.0  | 21.0  | 22.0  | 22.0  | 9.0   | 22.0  |
| Total Split (s)      | 33.0  | 33.0  | 90.0  | 90.0  | 17.0  | 107.0 |
| Total Split (%)      | 23.6% | 23.6% | 64.3% | 64.3% | 12.1% | 76.4% |
| Yellow Time (s)      | 3.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 5.0   | 5.0   | 6.0   | 6.0   | 5.0   | 6.0   |
| Lead/Lag             |       |       | Lag   | Lag   | Lead  |       |
| Lead-Lag Optimize?   |       |       |       |       |       |       |
| Recall Mode          | None  | None  | Max   | Max   | None  | Max   |
| Act Effct Green (s)  | 15.7  | 15.7  | 87.9  | 87.9  | 102.1 | 101.1 |
| Actuated g/C Ratio   | 0.12  | 0.12  | 0.69  | 0.69  | 0.80  | 0.79  |
| v/c Ratio            | 0.67  | 0.05  | 0.23  | 0.05  | 0.24  | 0.56  |
| Control Delay        | 68.5  | 22.9  | 8.2   | 2.2   | 4.1   | 6.3   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.8   |
| Total Delay          | 68.5  | 22.9  | 8.2   | 2.2   | 4.1   | 7.1   |
| LOS                  | E     | C     | A     | A     | A     | A     |
| Approach Delay       | 65.3  |       | 7.6   |       |       | 6.8   |
| Approach LOS         | E     |       | A     |       |       | A     |

| Intersection Summary               |                  |
|------------------------------------|------------------|
| Cycle Length:                      | 140              |
| Actuated Cycle Length:             | 127.8            |
| Natural Cycle:                     | 60               |
| Control Type:                      | Semi Act-Uncoord |
| Maximum v/c Ratio:                 | 0.67             |
| Intersection Signal Delay:         | 10.7             |
| Intersection LOS:                  | B                |
| Intersection Capacity Utilization: | 57.0%            |
| ICU Level of Service:              | B                |
| Analysis Period (min):             | 15               |



**Phasings**  
**111: Van Dorn St & Library Ln Ext**

2020 Market with Traffic Mitigation  
 PM PEAK

| Lane Group              | WBL   | WBR   | NBT   | NBR   | SBL   | SBT   |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Protected Phases        | 8     |       | 2     |       | 1     | 6     |
| Permitted Phases        |       | 8     |       | 2     | 6     |       |
| Minimum Initial (s)     | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   | 4.0   |
| Minimum Split (s)       | 21.0  | 21.0  | 22.0  | 22.0  | 9.0   | 22.0  |
| Total Split (s)         | 33.0  | 33.0  | 90.0  | 90.0  | 17.0  | 107.0 |
| Total Split (%)         | 23.6% | 23.6% | 64.3% | 64.3% | 12.1% | 76.4% |
| Maximum Green (s)       | 28.0  | 28.0  | 84.0  | 84.0  | 12.0  | 101.0 |
| Yellow Time (s)         | 3.0   | 3.0   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)        | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   | 2.0   |
| Lead/Lag                |       |       | Lag   | Lag   | Lead  |       |
| Lead-Lag Optimize?      |       |       |       |       |       |       |
| Vehicle Extension (s)   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Minimum Gap (s)         | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| Time Before Reduce (s)  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Time To Reduce (s)      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Recall Mode             | None  | None  | Max   | Max   | None  | Max   |
| Walk Time (s)           | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |
| Flash Dont Walk (s)     | 11.0  | 11.0  | 11.0  | 11.0  |       | 11.0  |
| Pedestrian Calls (#/hr) | 0     | 0     | 0     | 0     | 0     | 0     |
| 90th %ile Green (s)     | 22.0  | 22.0  | 85.5  | 85.5  | 10.5  | 101.0 |
| 90th %ile Term Code     | Gap   | Gap   | Hold  | Hold  | Gap   | MaxR  |
| 70th %ile Green (s)     | 18.2  | 18.2  | 87.1  | 87.1  | 8.9   | 101.0 |
| 70th %ile Term Code     | Gap   | Gap   | Hold  | Hold  | Gap   | MaxR  |
| 50th %ile Green (s)     | 15.7  | 15.7  | 88.0  | 88.0  | 8.0   | 101.0 |
| 50th %ile Term Code     | Gap   | Gap   | Hold  | Hold  | Gap   | MaxR  |
| 30th %ile Green (s)     | 13.3  | 13.3  | 88.7  | 88.7  | 7.3   | 101.0 |
| 30th %ile Term Code     | Gap   | Gap   | Hold  | Hold  | Gap   | MaxR  |
| 10th %ile Green (s)     | 10.0  | 10.0  | 89.6  | 89.6  | 6.4   | 101.0 |
| 10th %ile Term Code     | Gap   | Gap   | Hold  | Hold  | Gap   | MaxR  |

| Intersection Summary      |                  |
|---------------------------|------------------|
| Cycle Length:             | 140              |
| Actuated Cycle Length:    | 127.8            |
| Control Type:             | Semi Act-Uncoord |
| 90th %ile Actuated Cycle: | 134              |
| 70th %ile Actuated Cycle: | 130.2            |
| 50th %ile Actuated Cycle: | 127.7            |
| 30th %ile Actuated Cycle: | 125.3            |
| 10th %ile Actuated Cycle: | 122              |

Lanes and Geometrics  
114: Kenmore Ave & Seminary Rd

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL  | WBT   | WBR  | NBL   | NBT  | NBR   | SBL  | SBT   | SBR  |
|---------------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|
| Lane Configurations |       |      |       |      |       |      |       |      |       |      |       |      |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12   | 12    | 12   | 12    | 12   | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |      | 0%    |      | 0%    |      | 0%    |      | 0%    |      | 0%    |      |
| Storage Length (ft) | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    |
| Storage Lanes       | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 1    | 0     | 0    | 1     | 0    |
| Taper Length (ft)   | 50    |      |       | 50   |       |      | 50    |      |       | 50   |       |      |
| Lane Util. Factor   | 1.00  | 0.91 | 0.91  | 1.00 | 0.91  | 0.91 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 |
| Ped Bike Factor     | 0.978 |      | 0.993 |      | 0.865 |      | 0.865 |      | 0.865 |      | 0.865 |      |
| Flt Protected       |       |      |       |      |       |      |       |      |       |      |       |      |
| Satd. Flow (prot)   | 0     | 4973 | 0     | 0    | 5050  | 0    | 0     | 0    | 1611  | 0    | 0     | 1611 |
| Flt Permitted       |       |      |       |      |       |      |       |      |       |      |       |      |
| Satd. Flow (perm)   | 0     | 4973 | 0     | 0    | 5050  | 0    | 0     | 0    | 1611  | 0    | 0     | 1611 |
| Link Speed (mph)    | 35    |      | 35    |      | 25    |      | 25    |      | 25    |      | 25    |      |
| Link Distance (ft)  | 195   |      | 277   |      | 600   |      | 463   |      | 463   |      | 463   |      |
| Travel Time (s)     | 3.8   |      | 5.4   |      | 16.4  |      | 12.6  |      | 12.6  |      | 12.6  |      |

Intersection Summary

Area Type: Other

Lanes and Geometrics  
191: I-395 SB On-Ramp & Seminary Rd (S)

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group          | EBL   | EBT  | EBR   | WBL  | WBT   | WBR  | NBL   | NBT  | NBR   | SBL  | SBT   | SBR  |
|---------------------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|
| Lane Configurations |       |      |       |      |       |      |       |      |       |      |       |      |
| Ideal Flow (vphpl)  | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 | 1900  | 1900 |
| Lane Width (ft)     | 12    | 12   | 12    | 12   | 12    | 12   | 12    | 12   | 12    | 12   | 12    | 12   |
| Grade (%)           | 0%    |      | 0%    |      | 0%    |      | 0%    |      | 0%    |      | 0%    |      |
| Storage Length (ft) | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 0     | 0    |
| Storage Lanes       | 1     | 1    | 0     | 0    | 0     | 0    | 0     | 0    | 1     | 0    | 1     | 0    |
| Taper Length (ft)   | 50    |      |       | 50   |       |      | 50    |      |       | 50   |       |      |
| Lane Util. Factor   | 1.00  | 0.91 | 0.91  | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00  | 0.91 | 0.91  | 1.00 |
| Ped Bike Factor     | 0.918 |      | 0.850 |      | 0.950 |      | 0.975 |      | 0.950 |      | 0.975 |      |
| Flt Protected       |       |      |       |      |       |      |       |      |       |      |       |      |
| Satd. Flow (prot)   | 0     | 3112 | 1441  | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 1610  | 3305 |
| Flt Permitted       |       |      |       |      |       |      |       |      |       |      |       |      |
| Satd. Flow (perm)   | 0     | 3112 | 1441  | 0    | 0     | 0    | 0     | 0    | 0     | 0    | 1610  | 3305 |
| Right Turn on Red   | Yes   |      | Yes   |      | Yes   |      | Yes   |      | Yes   |      | Yes   |      |
| Satd. Flow (RTOR)   | 294   |      | 613   |      | 144   |      | 144   |      | 144   |      | 144   |      |
| Link Speed (mph)    | 35    |      | 35    |      | 35    |      | 35    |      | 35    |      | 35    |      |
| Link Distance (ft)  | 371   |      | 307   |      | 340   |      | 280   |      | 280   |      | 280   |      |
| Travel Time (s)     | 7.2   |      | 6.0   |      | 6.6   |      | 5.5   |      | 5.5   |      | 5.5   |      |

Intersection Summary

Area Type: Other

Timings  
191: I-395 SB On-Ramp & Seminary Rd (S)

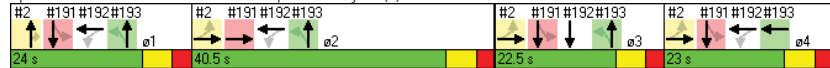
2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group           | EBT   | EBR   | SBL   | SBT   | ø1   | ø3   | ø4   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  | ↔↔    | ↗     | ↖     | ↕     |      |      |      |
| Volume (vph)         | 475   | 1140  | 655   | 305   |      |      |      |
| Turn Type            | NA    | Free  | Perm  | NA    |      |      |      |
| Protected Phases     | 2     |       | 1 3 4 | 1 3 4 | 1    | 3    | 4    |
| Permitted Phases     |       | Free  | 1 3 4 |       |      |      |      |
| Detector Phase       | 2     |       | 1 3 4 | 1 3 4 |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  | 10.0  |       |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    | 22.5  |       |       |       | 22.5 | 22.5 | 23.0 |
| Total Split (s)      | 40.5  | 0.0   | 69.5  | 69.5  | 24.0 | 22.5 | 23.0 |
| Total Split (%)      | 36.8% | 0.0%  | 63.2% | 63.2% | 22%  | 20%  | 21%  |
| Yellow Time (s)      | 4.0   |       |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     | 2.5   |       |       |       | 2.5  | 2.5  | 3.0  |
| Lost Time Adjust (s) | -2.5  | 0.0   | -2.5  | -2.5  |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             | Lag   |       |       |       | Lead | Lead | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          | Min   |       |       |       | Min  | Min  | Min  |
| Act Effct Green (s)  | 36.5  | 110.0 | 65.5  | 65.5  |      |      |      |
| Actuated g/C Ratio   | 0.33  | 1.00  | 0.60  | 0.60  |      |      |      |
| v/c Ratio            | 0.91  | 0.43  | 0.35  | 0.34  |      |      |      |
| Control Delay        | 38.3  | 0.9   | 1.5   | 14.0  |      |      |      |
| Queue Delay          | 0.0   | 0.0   | 26.7  | 0.1   |      |      |      |
| Total Delay          | 38.3  | 0.9   | 28.2  | 14.1  |      |      |      |
| LOS                  | D     | A     | C     | B     |      |      |      |
| Approach Delay       | 25.1  |       |       | 18.9  |      |      |      |
| Approach LOS         | C     |       |       | B     |      |      |      |

Intersection Summary

|   |                        |
|---|------------------------|
| Cycle Length: 110                       |                        |
| Actuated Cycle Length: 110              |                        |
| Natural Cycle: 95                       |                        |
| Control Type: Actuated-Uncoordinated    |                        |
| Maximum v/c Ratio: 0.91                 |                        |
| Intersection Signal Delay: 22.8         | Intersection LOS: C    |
| Intersection Capacity Utilization 68.6% | ICU Level of Service C |
| Analysis Period (min) 15                |                        |

Splits and Phases: 191: I-395 SB On-Ramp & Seminary Rd (S)



Phasings  
191: I-395 SB On-Ramp & Seminary Rd (S)

2020 Market with Traffic Mitigation  
PM PEAK

| Lane Group              | EBT   | EBR  | SBL   | SBT   | ø1   | ø3   | ø4   |
|-------------------------|-------|------|-------|-------|------|------|------|
| Protected Phases        | 2     |      |       | 1 3 4 | 1    | 3    | 4    |
| Permitted Phases        |       | Free | 1 3 4 |       |      |      |      |
| Minimum Initial (s)     | 10.0  |      |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       | 22.5  |      |       |       | 22.5 | 22.5 | 23.0 |
| Total Split (s)         | 40.5  | 0.0  | 69.5  | 69.5  | 24.0 | 22.5 | 23.0 |
| Total Split (%)         | 36.8% | 0.0% | 63.2% | 63.2% | 22%  | 20%  | 21%  |
| Maximum Green (s)       | 34.0  |      |       |       | 17.5 | 16.0 | 16.0 |
| Yellow Time (s)         | 4.0   |      |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        | 2.5   |      |       |       | 2.5  | 2.5  | 3.0  |
| Lead/Lag                | Lag   |      |       |       | Lead | Lead | Lag  |
| Lead-Lag Optimize?      |       |      |       |       |      |      |      |
| Vehicle Extension (s)   | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Minimum Gap (s)         | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Recall Mode             | Min   |      |       |       | Min  | Min  | Min  |
| Walk Time (s)           |       |      |       |       |      |      |      |
| Flash Dont Walk (s)     |       |      |       |       |      |      |      |
| Pedestrian Calls (#/hr) |       |      |       |       |      |      |      |
| 90th %ile Green (s)     | 34.0  |      |       |       | 17.5 | 16.0 | 16.0 |
| 90th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 70th %ile Green (s)     | 34.0  |      |       |       | 17.5 | 16.0 | 16.0 |
| 70th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 50th %ile Green (s)     | 34.0  |      |       |       | 17.5 | 16.0 | 16.0 |
| 50th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 30th %ile Green (s)     | 34.0  |      |       |       | 17.5 | 16.0 | 16.0 |
| 30th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 10th %ile Green (s)     | 34.0  |      |       |       | 17.5 | 16.0 | 16.0 |
| 10th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |

Intersection Summary

|                                      |
|--------------------------------------|
| Cycle Length: 110                    |
| Actuated Cycle Length: 110           |
| Control Type: Actuated-Uncoordinated |
| 90th %ile Actuated Cycle: 110        |
| 70th %ile Actuated Cycle: 110        |
| 50th %ile Actuated Cycle: 110        |
| 30th %ile Actuated Cycle: 110        |
| 10th %ile Actuated Cycle: 110        |

Lanes and Geometrics 2020 Market with Traffic Mitigation  
PM PEAK  
192: I-395 SB On-Ramp/I-395 SB Off-Ramp & Seminary Rd (N)

| Lane Group          | EBL  | EBT  | EBR  | WBL   | WBT   | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR   |
|---------------------|------|------|------|-------|-------|------|------|------|------|------|------|-------|
| Lane Configurations |      |      |      | ↔     | ↔     |      |      |      |      |      | ↔    | ↔     |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900  | 1900  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  |
| Lane Width (ft)     | 12   | 12   | 12   | 12    | 12    | 12   | 12   | 12   | 12   | 12   | 12   | 12    |
| Grade (%)           |      | 0%   |      |       | 0%    |      |      | 0%   |      |      | 0%   |       |
| Storage Length (ft) | 0    |      | 0    | 0     |       | 0    | 0    |      | 0    | 0    |      | 600   |
| Storage Lanes       | 0    |      | 0    | 1     |       | 0    | 0    |      | 0    | 0    |      | 1     |
| Taper Length (ft)   | 50   |      |      | 50    |       |      | 50   |      |      | 50   |      |       |
| Lane Util. Factor   | 1.00 | 1.00 | 1.00 | 0.91  | 0.91  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00  |
| Ped Bike Factor     |      |      |      |       |       |      |      |      |      |      |      |       |
| Frt                 |      |      |      |       |       |      |      |      |      |      |      | 0.850 |
| Flt Protected       |      |      |      | 0.950 | 0.988 |      |      |      |      |      |      |       |
| Satd. Flow (prot)   | 0    | 0    | 0    | 1610  | 3350  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583  |
| Flt Permitted       |      |      |      | 0.950 | 0.988 |      |      |      |      |      |      |       |
| Satd. Flow (perm)   | 0    | 0    | 0    | 1610  | 3350  | 0    | 0    | 0    | 0    | 0    | 3539 | 1583  |
| Right Turn on Red   |      |      | Yes  | Yes   |       | Yes  |      |      | Yes  |      |      | Yes   |
| Satd. Flow (RTOR)   |      |      |      | 55    | 55    |      |      |      |      |      |      | 478   |
| Link Speed (mph)    |      | 30   |      |       | 35    |      |      | 35   |      |      | 35   |       |
| Link Distance (ft)  |      | 430  |      |       | 149   |      |      | 280  |      |      | 1465 |       |
| Travel Time (s)     |      | 9.8  |      |       | 2.9   |      |      | 5.5  |      |      | 28.5 |       |

**Intersection Summary**

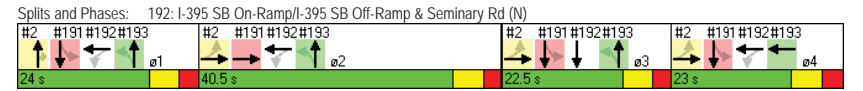
Area Type: Other

Timings 2020 Market with Traffic Mitigation  
PM PEAK  
192: I-395 SB On-Ramp/I-395 SB Off-Ramp & Seminary Rd (N)

| Lane Group           | WBL   | WBT   | SBT   | SBR   | ø1   | ø2   | ø4   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  | ↔     | ↔     | ↔     | ↔     |      |      |      |
| Volume (vph)         | 610   | 640   | 350   | 445   |      |      |      |
| Turn Type            | Perm  | NA    | NA    | Free  |      |      |      |
| Protected Phases     |       | 1 2 4 | 3     |       | 1    | 2    | 4    |
| Permitted Phases     | 1 2 4 |       |       | Free  |      |      |      |
| Detector Phase       | 1 2 4 | 1 2 4 | 3     |       |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  |       |       | 10.0  |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    |       |       | 22.5  |       | 22.5 | 22.5 | 23.0 |
| Total Split (s)      | 87.5  | 87.5  | 22.5  | 0.0   | 24.0 | 40.5 | 23.0 |
| Total Split (%)      | 79.5% | 79.5% | 20.5% | 0.0%  | 22%  | 37%  | 21%  |
| Yellow Time (s)      |       |       | 4.0   |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     |       |       | 2.5   |       | 2.5  | 2.5  | 3.0  |
| Lost Time Adjust (s) | -2.5  | -2.5  | -2.5  | 0.0   |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             |       |       | Lead  |       | Lead | Lag  | Lag  |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          |       |       | Min   |       | Min  | Min  | Min  |
| Act Effct Green (s)  | 83.5  | 83.5  | 18.5  | 110.0 |      |      |      |
| Actuated g/C Ratio   | 0.76  | 0.76  | 0.17  | 1.00  |      |      |      |
| v/c Ratio            | 0.36  | 0.35  | 0.63  | 0.30  |      |      |      |
| Control Delay        | 2.4   | 4.1   | 48.0  | 0.5   |      |      |      |
| Queue Delay          | 0.8   | 2.4   | 0.0   | 0.0   |      |      |      |
| Total Delay          | 3.1   | 6.5   | 48.0  | 0.5   |      |      |      |
| LOS                  | A     | A     | D     | A     |      |      |      |
| Approach Delay       |       | 5.4   | 21.4  |       |      |      |      |
| Approach LOS         |       | A     | C     |       |      |      |      |

**Intersection Summary**

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Natural Cycle Length: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.91  
 Intersection Signal Delay: 11.6  
 Intersection Capacity Utilization 41.7%  
 Analysis Period (min) 15  
 Intersection LOS: B  
 ICU Level of Service A



Phasings 2020 Market with Traffic Mitigation  
 192: I-395 SB On-Ramp/I-395 SB Off-Ramp & Seminary Rd (N) PM PEAK

| Lane Group              | WBL   | WBT   | SBT   | SBR  | ø1   | ø2   | ø4   |
|-------------------------|-------|-------|-------|------|------|------|------|
| Protected Phases        |       | 1 2 4 | 3     |      | 1    | 2    | 4    |
| Permitted Phases        | 1 2 4 |       |       | Free |      |      |      |
| Minimum Initial (s)     |       |       | 10.0  |      | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       |       |       | 22.5  |      | 22.5 | 22.5 | 23.0 |
| Total Split (s)         | 87.5  | 87.5  | 22.5  | 0.0  | 24.0 | 40.5 | 23.0 |
| Total Split (%)         | 79.5% | 79.5% | 20.5% | 0.0% | 22%  | 37%  | 21%  |
| Maximum Green (s)       |       |       | 16.0  |      | 17.5 | 34.0 | 16.0 |
| Yellow Time (s)         |       |       | 4.0   |      | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        |       |       | 2.5   |      | 2.5  | 2.5  | 3.0  |
| Lead/Lag                |       |       | Lead  |      | Lead | Lag  | Lag  |
| Lead-Lag Optimize?      |       |       |       |      |      |      |      |
| Vehicle Extension (s)   |       |       | 3.0   |      | 5.0  | 3.0  | 3.0  |
| Minimum Gap (s)         |       |       | 3.0   |      | 5.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  |       |       | 0.0   |      | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      |       |       | 0.0   |      | 0.0  | 0.0  | 0.0  |
| Recall Mode             |       |       | Min   |      | Min  | Min  | Min  |
| Walk Time (s)           |       |       |       |      |      |      |      |
| Flash Dont Walk (s)     |       |       |       |      |      |      |      |
| Pedestrian Calls (#/hr) |       |       |       |      |      |      |      |
| 90th %ile Green (s)     |       |       | 16.0  |      | 17.5 | 34.0 | 16.0 |
| 90th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |
| 70th %ile Green (s)     |       |       | 16.0  |      | 17.5 | 34.0 | 16.0 |
| 70th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |
| 50th %ile Green (s)     |       |       | 16.0  |      | 17.5 | 34.0 | 16.0 |
| 50th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |
| 30th %ile Green (s)     |       |       | 16.0  |      | 17.5 | 34.0 | 16.0 |
| 30th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |
| 10th %ile Green (s)     |       |       | 16.0  |      | 17.5 | 34.0 | 16.0 |
| 10th %ile Term Code     |       |       | Max   |      | Max  | Max  | Max  |

| Intersection Summary      |                        |  |  |  |  |  |  |
|---------------------------|------------------------|--|--|--|--|--|--|
| Cycle Length:             | 110                    |  |  |  |  |  |  |
| Actuated Cycle Length:    | 110                    |  |  |  |  |  |  |
| Control Type:             | Actuated-Uncoordinated |  |  |  |  |  |  |
| 90th %ile Actuated Cycle: | 110                    |  |  |  |  |  |  |
| 70th %ile Actuated Cycle: | 110                    |  |  |  |  |  |  |
| 50th %ile Actuated Cycle: | 110                    |  |  |  |  |  |  |
| 30th %ile Actuated Cycle: | 110                    |  |  |  |  |  |  |
| 10th %ile Actuated Cycle: | 110                    |  |  |  |  |  |  |

Lanes and Geometrics 2020 Market with Traffic Mitigation  
 193: I-395 NB Off-Ramp/I-395 NB On-Ramp & Seminary Rd (N) PM PEAK

| Lane Group          | EBL  | EBT  | EBR  | WBL  | WBT  | WBR   | NBL   | NBT   | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|-------|-------|-------|------|------|------|------|
| Lane Configurations |      |      |      |      | ↑↑   | ↑↑    | ↑↑    | ↑↑    |      |      |      |      |
| Ideal Flow (vphpl)  | 1900 | 1900 | 1900 | 1900 | 1900 | 1900  | 1900  | 1900  | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft)     | 12   | 12   | 12   | 12   | 12   | 12    | 12    | 12    | 12   | 12   | 12   | 12   |
| Grade (%)           |      | 0%   |      |      | 0%   |       |       | 0%    |      |      | 0%   |      |
| Storage Length (ft) |      | 0    | 0    | 0    |      | 125   | 0     |       | 0    | 0    |      | 0    |
| Storage Lanes       |      | 0    | 0    | 0    |      | 1     | 1     |       | 0    | 0    |      | 0    |
| Taper Length (ft)   |      | 50   |      | 50   |      |       | 50    |       |      | 50   |      |      |
| Lane Util. Factor   | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00  | 0.91  | 0.91  | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor     |      |      |      |      |      |       |       |       |      |      |      |      |
| Frt                 |      |      |      |      |      | 0.850 |       |       |      |      |      |      |
| Flt Protected       |      |      |      |      |      |       | 0.950 | 0.991 |      |      |      |      |
| Satd. Flow (prot)   | 0    | 0    | 0    | 0    | 3539 | 1583  | 1610  | 3360  | 0    | 0    | 0    | 0    |
| Flt Permitted       |      |      |      |      |      |       | 0.950 | 0.991 |      |      |      |      |
| Satd. Flow (perm)   | 0    | 0    | 0    | 0    | 3539 | 1583  | 1610  | 3360  | 0    | 0    | 0    | 0    |
| Right Turn on Red   |      |      | Yes  |      |      | Yes   | Yes   |       | Yes  |      |      | Yes  |
| Satd. Flow (RTOR)   |      |      |      |      |      |       | 323   | 74    | 70   |      |      |      |
| Link Speed (mph)    |      | 35   |      |      | 35   |       |       |       | 35   |      |      | 35   |
| Link Distance (ft)  |      | 130  |      |      | 302  |       |       |       | 272  |      |      | 567  |
| Travel Time (s)     |      | 2.5  |      |      | 5.9  |       |       |       | 5.3  |      |      | 11.0 |

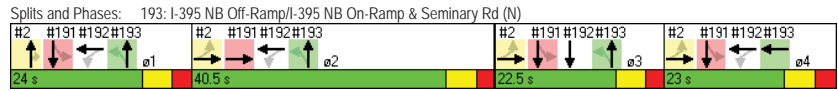
| Intersection Summary |       |
|----------------------|-------|
| Area Type:           | Other |

**Timings** 2020 Market with Traffic Mitigation  
PM PEAK  
**193: I-395 NB Off-Ramp/I-395 NB On-Ramp & Seminary Rd (N)**

| Lane Group           | WBT   | WBR   | NBL   | NBT   | ø1   | ø2   | ø3   |
|----------------------|-------|-------|-------|-------|------|------|------|
| Lane Configurations  | ↑↑    | ↑     | ↑     | ↑↑    |      |      |      |
| Volume (vph)         | 325   | 300   | 395   | 475   |      |      |      |
| Turn Type            | NA    | Free  | Perm  | NA    |      |      |      |
| Protected Phases     | 4     |       | 1 2 3 | 1 2 3 | 1    | 2    | 3    |
| Permitted Phases     |       | Free  | 1 2 3 |       |      |      |      |
| Detector Phase       | 4     |       | 1 2 3 | 1 2 3 |      |      |      |
| Switch Phase         |       |       |       |       |      |      |      |
| Minimum Initial (s)  | 10.0  |       |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)    | 23.0  |       |       |       | 22.5 | 22.5 | 22.5 |
| Total Split (s)      | 23.0  | 0.0   | 87.0  | 87.0  | 24.0 | 40.5 | 22.5 |
| Total Split (%)      | 20.9% | 0.0%  | 79.1% | 79.1% | 22%  | 37%  | 20%  |
| Yellow Time (s)      | 4.0   |       |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)     | 3.0   |       |       |       | 2.5  | 2.5  | 2.5  |
| Lost Time Adjust (s) | -3.0  | 0.0   | -2.5  | -2.5  |      |      |      |
| Total Lost Time (s)  | 4.0   | 4.0   | 4.0   | 4.0   |      |      |      |
| Lead/Lag             | Lag   |       |       |       | Lead | Lag  | Lead |
| Lead-Lag Optimize?   |       |       |       |       |      |      |      |
| Recall Mode          | Min   |       |       |       | Min  | Min  | Min  |
| Act Effct Green (s)  | 19.0  | 110.0 | 83.0  | 83.0  |      |      |      |
| Actuated g/C Ratio   | 0.17  | 1.00  | 0.75  | 0.75  |      |      |      |
| v/c Ratio            | 0.57  | 0.20  | 0.25  | 0.25  |      |      |      |
| Control Delay        | 45.9  | 0.3   | 4.4   | 3.2   |      |      |      |
| Queue Delay          | 0.0   | 0.0   | 6.2   | 0.3   |      |      |      |
| Total Delay          | 45.9  | 0.3   | 10.6  | 3.5   |      |      |      |
| LOS                  | D     | A     | B     | A     |      |      |      |
| Approach Delay       | 24.0  |       |       | 5.9   |      |      |      |
| Approach LOS         | C     |       |       | A     |      |      |      |

**Intersection Summary**

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.91  
 Intersection Signal Delay: 13.4  
 Intersection LOS: B  
 Intersection Capacity Utilization 64.0%  
 ICU Level of Service C  
 Analysis Period (min) 15



**Phasings** 2020 Market with Traffic Mitigation  
PM PEAK  
**193: I-395 NB Off-Ramp/I-395 NB On-Ramp & Seminary Rd (N)**

| Lane Group              | WBT   | WBR  | NBL   | NBT   | ø1   | ø2   | ø3   |
|-------------------------|-------|------|-------|-------|------|------|------|
| Protected Phases        | 4     |      |       | 1 2 3 | 1    | 2    | 3    |
| Permitted Phases        |       | Free | 1 2 3 |       |      |      |      |
| Minimum Initial (s)     | 10.0  |      |       |       | 10.0 | 10.0 | 10.0 |
| Minimum Split (s)       | 23.0  |      |       |       | 22.5 | 22.5 | 22.5 |
| Total Split (s)         | 23.0  | 0.0  | 87.0  | 87.0  | 24.0 | 40.5 | 22.5 |
| Total Split (%)         | 20.9% | 0.0% | 79.1% | 79.1% | 22%  | 37%  | 20%  |
| Maximum Green (s)       | 16.0  |      |       |       | 17.5 | 34.0 | 16.0 |
| Yellow Time (s)         | 4.0   |      |       |       | 4.0  | 4.0  | 4.0  |
| All-Red Time (s)        | 3.0   |      |       |       | 2.5  | 2.5  | 2.5  |
| Lead/Lag                | Lag   |      |       |       | Lead | Lag  | Lead |
| Lead-Lag Optimize?      |       |      |       |       |      |      |      |
| Vehicle Extension (s)   | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Minimum Gap (s)         | 3.0   |      |       |       | 5.0  | 3.0  | 3.0  |
| Time Before Reduce (s)  | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Time To Reduce (s)      | 0.0   |      |       |       | 0.0  | 0.0  | 0.0  |
| Recall Mode             | Min   |      |       |       | Min  | Min  | Min  |
| Walk Time (s)           |       |      |       |       |      |      |      |
| Flash Dont Walk (s)     |       |      |       |       |      |      |      |
| Pedestrian Calls (#/hr) |       |      |       |       |      |      |      |
| 90th %ile Green (s)     | 16.0  |      |       |       | 17.5 | 34.0 | 16.0 |
| 90th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 70th %ile Green (s)     | 16.0  |      |       |       | 17.5 | 34.0 | 16.0 |
| 70th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 50th %ile Green (s)     | 16.0  |      |       |       | 17.5 | 34.0 | 16.0 |
| 50th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 30th %ile Green (s)     | 16.0  |      |       |       | 17.5 | 34.0 | 16.0 |
| 30th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |
| 10th %ile Green (s)     | 16.0  |      |       |       | 17.5 | 34.0 | 16.0 |
| 10th %ile Term Code     | Max   |      |       |       | Max  | Max  | Max  |

**Intersection Summary**

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Control Type: Actuated-Uncoordinated  
 90th %ile Actuated Cycle: 110  
 70th %ile Actuated Cycle: 110  
 50th %ile Actuated Cycle: 110  
 30th %ile Actuated Cycle: 110  
 10th %ile Actuated Cycle: 110