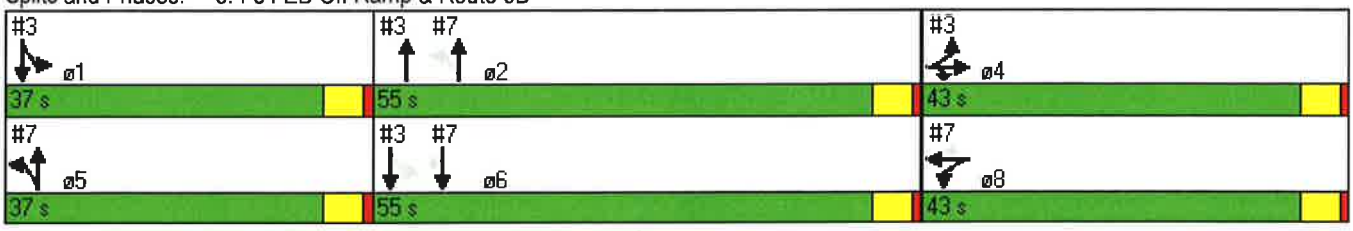
# Appendix 2.19-1
# Mitigation

| Lane Group | EBL | EBT | EBR | NBT | SBL | SBT | ø5 | ø6 | ø8 |
|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | |
| Volume (vph) | 563 | 3 | 479 | 577 | 219 | 313 | | | |
| Turn Type | Split | | Prot | | custom | | | | |
| Protected Phases | 4 | 4 | 4 | 2 | 1 | 1 6 | 5 | 6 | 8 |
| Permitted Phases | | | | | 6 | | | | |
| Detector Phase | 4 | 4 | 4 | 2 | 1 | 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) | 21.0 | 21.0 | 21.0 | 21.0 | 9.0 | | 9.0 | 21.0 | 21.0 |
| Total Split (s) | 43.0 | 43.0 | 43.0 | 55.0 | 37.0 | 92.0 | 37.0 | 55.0 | 43.0 |
| Total Split (%) | 31.9% | 31.9% | 31.9% | 40.7% | 27.4% | 68.1% | 27% | 41% | 32% |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | | |
| Lead/Lag | | | | Lag | Lead | | Lead | Lag | |
| Lead-Lag Optimize? | | | | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | None | None | C-Max | None | | None | Max | None |
| Act Effct Green (s) | 38.0 | 38.0 | 38.0 | 63.6 | 72.7 | 72.7 | | | |
| Actuated g/C Ratio | 0.28 | 0.28 | 0.28 | 0.47 | 0.54 | 0.54 | | | |
| v/c Ratio | 1.37 | 0.01 | 0.70 | 0.35 | 0.50 | 0.35 | | | |
| Control Delay | 216.1 | 35.0 | 9.4 | 21.8 | 21.0 | 12.8 | | | |
| Queue Delay | 20.8 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | | | |
| Total Delay | 236.9 | 35.0 | 9.4 | 21.8 | 21.0 | 12.9 | | | |
| LOS | F | C | A | C | C | B | | | |
| Approach Delay | | 131.9 | | 21.8 | | 16.2 | | | |
| Approach LOS | | F | | C | | B | | | |

## Intersection Summary

Cycle Length: 135
Actuated Cycle Length: 135
Offset: 0 (0%), Referenced to phase 2:NBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.37
Intersection Signal Delay: 72.0 — Intersection LOS: E
Intersection Capacity Utilization 88.7% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 3: I-84 EB Off Ramp & Route 9D

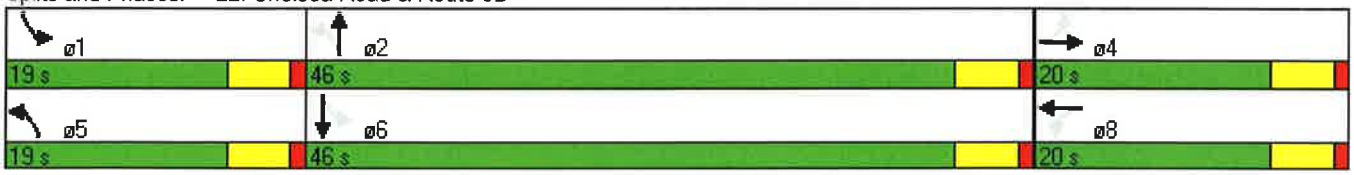


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | |
| Volume (vph) | 34 | 66 | 29 | 9 | 87 | 739 | 42 | 892 |
| Turn Type | Perm | | Perm | | pm+pt | | pm+pt | |
| Protected Phases | | 4 | | 8 | 5 | 2 | 1 | 6 |
| Permitted Phases | 4 | | 8 | | 2 | | 6 | |
| Detector Phase | 4 | 4 | 8 | 8 | 5 | 2 | 1 | 6 |
| Switch Phase | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 26.0 | 15.0 | 26.0 |
| Total Split (s) | 20.0 | 20.0 | 20.0 | 20.0 | 19.0 | 46.0 | 19.0 | 46.0 |
| Total Split (%) | 23.5% | 23.5% | 23.5% | 23.5% | 22.4% | 54.1% | 22.4% | 54.1% |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | Lead | Lag | Lead | Lag |
| Lead-Lag Optimize? | | | | | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | Max | None | Max |
| Act Effct Green (s) | | 13.0 | | 13.0 | 49.4 | 44.8 | 46.4 | 41.5 |
| Actuated g/C Ratio | | 0.17 | | 0.17 | 0.66 | 0.60 | 0.62 | 0.56 |
| v/c Ratio | | 0.75 | | 0.41 | 0.39 | 0.80 | 0.15 | 0.98 |
| Control Delay | | 39.8 | | 28.0 | 11.1 | 21.4 | 5.5 | 43.4 |
| Queue Delay | | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | | 39.8 | | 28.0 | 11.1 | 21.4 | 5.5 | 43.4 |
| LOS | | D | | C | B | C | A | D |
| Approach Delay | | 39.8 | | 28.0 | | 20.3 | | 41.7 |
| Approach LOS | | D | | C | | C | | D |

**Intersection Summary**

Cycle Length: 85
Actuated Cycle Length: 74.4
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 32.1 — Intersection LOS: C
Intersection Capacity Utilization 76.8% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 22: Chelsea Road & Route 9D



| Lane Group | EBT | EBR | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | |
| Volume (vph) | 89 | 87 | 183 | 66 | 72 | 753 | 29 | 589 |
| Turn Type | | custom | custom | | pm+pt | | pm+pt | |
| Protected Phases | 7 | 7 | 8 | 8 | 5 | 2 | 1 | 6 |
| Permitted Phases | | 7 | 8 | | 2 | | 6 | |
| Detector Phase | 7 | 7 | 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) | 10.0 | 10.0 | 10.0 | 10.0 | 8.0 | 21.5 | 8.0 | 21.5 |
| Total Split (s) | 14.0 | 14.0 | 16.0 | 16.0 | 9.0 | 41.0 | 9.0 | 41.0 |
| Total Split (%) | 17.5% | 17.5% | 20.0% | 20.0% | 11.3% | 51.3% | 11.3% | 51.3% |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.5 | 3.0 | 3.5 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 0.0 | 2.0 | 0.0 | 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 | 3.0 | 5.5 | 3.0 | 5.5 |
| Lead/Lag | Lead | Lead | Lag | Lag | Lead | Lag | Lead | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | None | None |
| Act Effct Green (s) | 8.5 | 8.5 | 11.0 | 11.0 | 42.8 | 38.0 | 41.5 | 34.4 |
| Actuated g/C Ratio | 0.11 | 0.11 | 0.14 | 0.14 | 0.56 | 0.50 | 0.54 | 0.45 |
| v/c Ratio | 0.64 | 0.38 | 0.86 | 0.37 | 0.29 | 1.17 | 0.14 | 0.82 |
| Control Delay | 49.7 | 12.7 | 67.0 | 31.5 | 10.1 | 109.2 | 8.6 | 29.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 49.7 | 12.7 | 67.0 | 31.5 | 10.1 | 109.2 | 8.6 | 29.4 |
| LOS | D | B | E | C | B | F | A | C |
| Approach Delay | 34.0 | | | 55.9 | | 101.9 | | 28.4 |
| Approach LOS | C | | | E | | F | | C |

**Intersection Summary**

Cycle Length: 80
Actuated Cycle Length: 76.6
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.17
Intersection Signal Delay: 67.2 — Intersection LOS: E
Intersection Capacity Utilization 81.1% — ICU Level of Service D
Analysis Period (min) 15

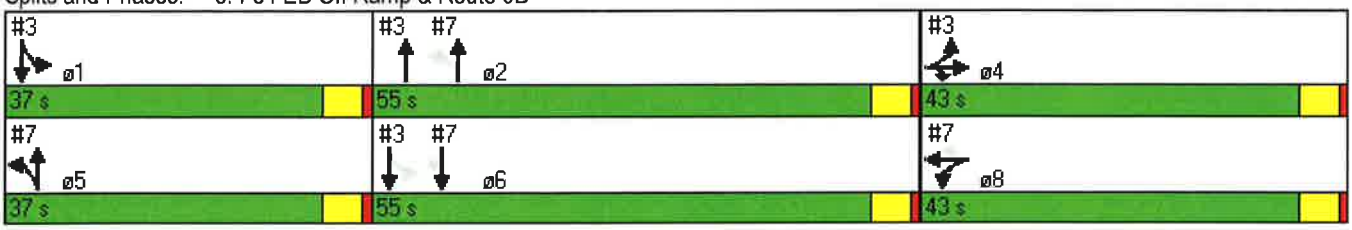
Splits and Phases: 48: New Hamburg Road & Route 9D

| Lane Group | EBL | EBT | EBR | NBT | SBL | SBT | ø5 | ø6 | ø8 |
|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | |
| Volume (vph) | 541 | 4 | 459 | 715 | 176 | 468 | | | |
| Turn Type | Split | | Prot | | custom | | | | |
| Protected Phases | 4 | 4 | 4 | 2 | 1 | 1 6 | 5 | 6 | 8 |
| Permitted Phases | | | | | 6 | | | | |
| Detector Phase | 4 | 4 | 4 | 2 | 1 | 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) | 21.0 | 21.0 | 21.0 | 21.0 | 9.0 | | 9.0 | 21.0 | 21.0 |
| Total Split (s) | 43.0 | 43.0 | 43.0 | 55.0 | 37.0 | 92.0 | 37.0 | 55.0 | 43.0 |
| Total Split (%) | 31.9% | 31.9% | 31.9% | 40.7% | 27.4% | 68.1% | 27% | 41% | 32% |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | | |
| Lead/Lag | | | | Lag | Lead | | Lead | Lag | |
| Lead-Lag Optimize? | | | | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | None | None | C-Max | None | | None | Max | None |
| Act Effct Green (s) | 38.0 | 38.0 | 38.0 | 55.8 | 78.8 | 79.8 | | | |
| Actuated g/C Ratio | 0.28 | 0.28 | 0.28 | 0.41 | 0.58 | 0.59 | | | |
| v/c Ratio | 1.28 | 0.01 | 0.79 | 0.48 | 0.40 | 0.48 | | | |
| Control Delay | 179.4 | 35.0 | 22.4 | 29.3 | 22.1 | 17.0 | | | |
| Queue Delay | 44.1 | 0.0 | 0.0 | 0.0 | 0.5 | 0.4 | | | |
| Total Delay | 223.6 | 35.0 | 22.4 | 29.3 | 22.7 | 17.4 | | | |
| LOS | F | C | C | C | C | B | | | |
| Approach Delay | | 130.8 | | 29.3 | | 18.9 | | | |
| Approach LOS | | F | | C | | B | | | |

**Intersection Summary**

Cycle Length: 135
Actuated Cycle Length: 135
Offset: 0 (0%), Referenced to phase 2:NBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.28
Intersection Signal Delay: 67.9 — Intersection LOS: E
Intersection Capacity Utilization 99.2% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 3: I-84 EB Off Ramp & Route 9D

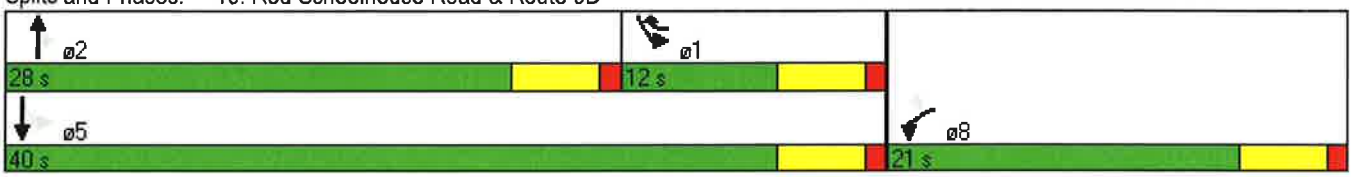


| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 92 | 166 | 843 | 74 | 207 | 862 |
| Turn Type | | pm+ov | | Perm | pm+pt | |
| Protected Phases | 8 | 1 | 2 | | 1 | 5 |
| Permitted Phases | | 8 | | 2 | 5 | |
| Detector Phase | 8 | 1 | 2 | 2 | 1 | 5 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 21.0 | 9.0 | 21.0 | 21.0 | 9.0 | 21.0 |
| Total Split (s) | 21.0 | 12.0 | 28.0 | 28.0 | 12.0 | 40.0 |
| Total Split (%) | 34.4% | 19.7% | 45.9% | 45.9% | 19.7% | 65.6% |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | Lag | Lead | Lead | Lag | |
| Lead-Lag Optimize? | | Yes | Yes | Yes | Yes | |
| Recall Mode | None | None | C-Max | C-Max | None | None |
| Act Effct Green (s) | 8.9 | 18.6 | 32.4 | 32.4 | 44.2 | 45.2 |
| Actuated g/C Ratio | 0.15 | 0.30 | 0.53 | 0.53 | 0.72 | 0.74 |
| v/c Ratio | 0.41 | 0.37 | 0.91 | 0.09 | 0.67 | 0.65 |
| Control Delay | 27.5 | 12.9 | 32.1 | 3.2 | 28.4 | 9.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 27.5 | 12.9 | 32.1 | 3.2 | 28.4 | 9.0 |
| LOS | C | B | C | A | C | A |
| Approach Delay | 18.1 | | 29.7 | | | 12.8 |
| Approach LOS | B | | C | | | B |

**Intersection Summary**

Cycle Length: 61
Actuated Cycle Length: 61
Offset: 0 (0%), Referenced to phase 2:NBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 20.4 — Intersection LOS: C
Intersection Capacity Utilization 73.4% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 19: Red Schoolhouse Road & Route 9D

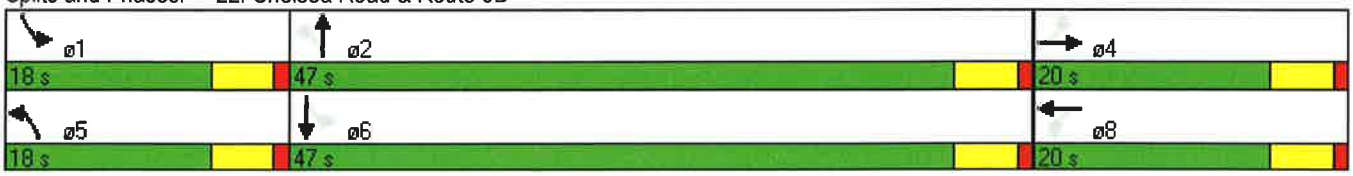


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | |
| Volume (vph) | 28 | 26 | 35 | 67 | 112 | 924 | 28 | 930 |
| Turn Type | Perm | | Perm | | pm+pt | | pm+pt | |
| Protected Phases | | 4 | | 8 | 5 | 2 | 1 | 6 |
| Permitted Phases | 4 | | 8 | | 2 | | 6 | |
| Detector Phase | 4 | 4 | 8 | 8 | 5 | 2 | 1 | 6 |
| Switch Phase | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 26.0 | 15.0 | 26.0 |
| Total Split (s) | 20.0 | 20.0 | 20.0 | 20.0 | 18.0 | 47.0 | 18.0 | 47.0 |
| Total Split (%) | 23.5% | 23.5% | 23.5% | 23.5% | 21.2% | 55.3% | 21.2% | 55.3% |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | Lead | Lag | Lead | Lag |
| Lead-Lag Optimize? | | | | | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | Max | None | Max |
| Act Effct Green (s) | | 11.7 | | 11.7 | 52.1 | 48.6 | 47.2 | 42.6 |
| Actuated g/C Ratio | | 0.16 | | 0.16 | 0.70 | 0.65 | 0.63 | 0.57 |
| v/c Ratio | | 0.62 | | 0.70 | 0.43 | 0.83 | 0.12 | 0.98 |
| Control Delay | | 25.1 | | 42.5 | 13.1 | 21.2 | 5.3 | 43.0 |
| Queue Delay | | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | | 25.1 | | 42.5 | 13.1 | 21.2 | 5.3 | 43.0 |
| LOS | | C | | D | B | C | A | D |
| Approach Delay | | 25.1 | | 42.5 | | 20.4 | | 41.9 |
| Approach LOS | | C | | D | | C | | D |

**Intersection Summary**

Cycle Length: 85
Actuated Cycle Length: 74.7
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 31.1 — Intersection LOS: C
Intersection Capacity Utilization 81.4% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 22: Chelsea Road & Route 9D



| Lane Group | EBT | EBR | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | |
| Volume (vph) | 92 | 150 | 210 | 81 | 96 | 719 | 33 | 749 |
| Turn Type | | custom | custom | | pm+pt | | pm+pt | |
| Protected Phases | 7 | 7 | 8 | 8 | 5 | 2 | 1 | 6 |
| Permitted Phases | | 7 | 8 | | 2 | | 6 | |
| Detector Phase | 7 | 7 | 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) | 10.0 | 10.0 | 10.0 | 10.0 | 8.0 | 21.0 | 8.0 | 21.0 |
| Total Split (s) | 20.0 | 20.0 | 17.0 | 17.0 | 10.0 | 43.0 | 10.0 | 43.0 |
| Total Split (%) | 22.2% | 22.2% | 18.9% | 18.9% | 11.1% | 47.8% | 11.1% | 47.8% |
| Yellow Time (s) | 3.0 | 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 | 0.0 | 2.0 | 0.0 | 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 | 3.0 | 5.0 | 3.0 | 5.0 |
| Lead/Lag | Lead | Lead | Lag | Lag | Lead | Lag | Lead | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | Max | None | Max |
| Act Effct Green (s) | 12.8 | 12.8 | 12.1 | 12.1 | 46.4 | 40.4 | 45.3 | 38.2 |
| Actuated g/C Ratio | 0.15 | 0.15 | 0.14 | 0.14 | 0.54 | 0.47 | 0.53 | 0.44 |
| v/c Ratio | 0.68 | 0.49 | 1.09 | 0.55 | 0.50 | 1.15 | 0.17 | 1.06 |
| Control Delay | 49.0 | 10.2 | 122.7 | 40.0 | 19.8 | 104.5 | 11.0 | 74.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 49.0 | 10.2 | 122.7 | 40.0 | 19.8 | 104.5 | 11.0 | 74.6 |
| LOS | D | B | F | D | B | F | B | E |
| Approach Delay | 29.3 | | | 93.7 | | 96.1 | | 72.1 |
| Approach LOS | C | | | F | | F | | E |

**Intersection Summary**

Cycle Length: 90
Actuated Cycle Length: 85.9
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.15
Intersection Signal Delay: 78.9 — Intersection LOS: E
Intersection Capacity Utilization 80.1% — ICU Level of Service D
Analysis Period (min) 15

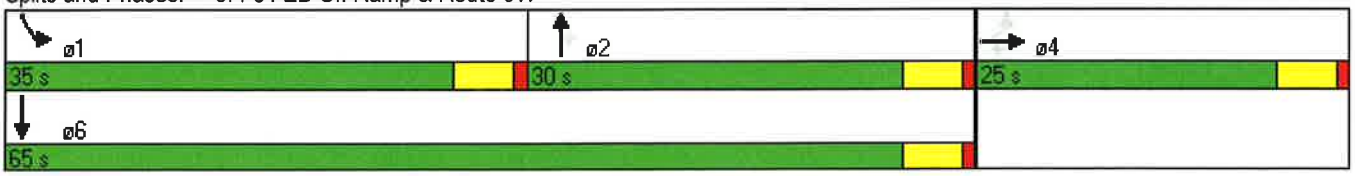
Splits and Phases: 48: New Hamburg Road & Route 9D

| Lane Group | EBL | EBT | EBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | |
| Volume (vph) | 409 | 2 | 382 | 459 | 496 | 1083 | 1389 |
| Turn Type | Perm | | Perm | | Perm | Prot | |
| Protected Phases | | 4 | | 2 | | 1 | 6 |
| Permitted Phases | 4 | | 4 | | 2 | | |
| Detector Phase | 4 | 4 | 4 | 2 | 2 | 1 | 6 |
| Switch Phase | | | | | | | |
| Minimum Initial (s) | 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 | 20.0 | 30.0 | 20.0 |
| Total Split (s) | 25.0 | 25.0 | 25.0 | 30.0 | 30.0 | 35.0 | 65.0 |
| Total Split (%) | 27.8% | 27.8% | 27.8% | 33.3% | 33.3% | 38.9% | 72.2% |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | Lag | Lag | Lead | |
| Lead-Lag Optimize? | | | | Yes | Yes | Yes | |
| Recall Mode | None | None | None | C-Max | C-Max | None | Max |
| Act Effct Green (s) | 20.0 | 20.0 | 20.0 | 25.0 | 25.0 | 30.0 | 60.0 |
| Actuated g/C Ratio | 0.22 | 0.22 | 0.22 | 0.28 | 0.28 | 0.33 | 0.67 |
| v/c Ratio | 0.67 | 0.65 | 1.12 | 0.54 | 0.73 | 1.05 | 0.68 |
| Control Delay | 42.5 | 41.4 | 113.8 | 30.2 | 13.3 | 54.3 | 7.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 46.9 | 9.0 |
| Total Delay | 42.5 | 41.4 | 113.8 | 30.2 | 13.3 | 101.3 | 16.7 |
| LOS | D | D | F | C | B | F | B |
| Approach Delay | | 76.5 | | 21.4 | | | 53.7 |
| Approach LOS | | E | | C | | | D |

## Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.12
Intersection Signal Delay: 51.0 — Intersection LOS: D
Intersection Capacity Utilization 85.5% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 3: I-84 EB Off Ramp & Route 9W

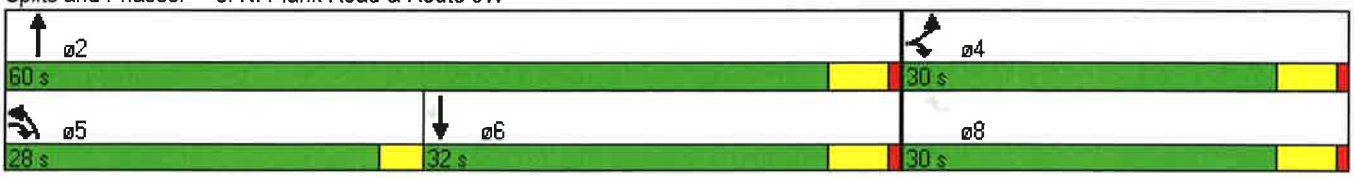


| Lane Group | EBL | EBR | WBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | |
| Volume (vph) | 68 | 1675 | 183 | 354 | 514 | 796 | 374 |
| Turn Type | Prot | custom | custom | Prot | | | Perm |
| Protected Phases | 4 | 4 5 | | 5 | 2 | 6 | |
| Permitted Phases | | 4 | 8 | | | | 6 |
| Detector Phase | 4 | 4 5 | 8 | 5 | 2 | 6 | 6 |
| Switch Phase | | | | | | | |
| Minimum Initial (s) | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 22.0 | | 22.0 | 18.0 | 50.0 | 30.0 | 30.0 |
| Total Split (s) | 30.0 | 58.0 | 30.0 | 28.0 | 60.0 | 32.0 | 32.0 |
| Total Split (%) | 33.3% | 64.4% | 33.3% | 31.1% | 66.7% | 35.6% | 35.6% |
| Yellow Time (s) | 4.0 | | 4.0 | 3.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | | 1.0 | 0.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 3.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | Lead | | Lag | Lag |
| Lead-Lag Optimize? | | | | Yes | | Yes | Yes |
| Recall Mode | None | | None | None | C-Max | C-Max | C-Max |
| Act Effct Green (s) | 25.0 | 53.0 | 25.0 | 25.0 | 55.0 | 27.0 | 27.0 |
| Actuated g/C Ratio | 0.28 | 0.59 | 0.28 | 0.28 | 0.61 | 0.30 | 0.30 |
| v/c Ratio | 0.15 | 1.10 | 0.31 | 0.40 | 0.25 | 0.84 | 0.55 |
| Control Delay | 25.6 | 74.5 | 1.2 | 36.8 | 11.0 | 38.3 | 5.6 |
| Queue Delay | 0.0 | 188.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 25.6 | 262.7 | 1.2 | 36.8 | 11.0 | 38.3 | 5.6 |
| LOS | C | F | A | D | B | D | A |
| Approach Delay | | | | | 21.5 | 27.8 | |
| Approach LOS | | | | | C | C | |

**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: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.10
Intersection Signal Delay: 123.4 — Intersection LOS: F
Intersection Capacity Utilization 88.9% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 8: N. Plank Road & Route 9W

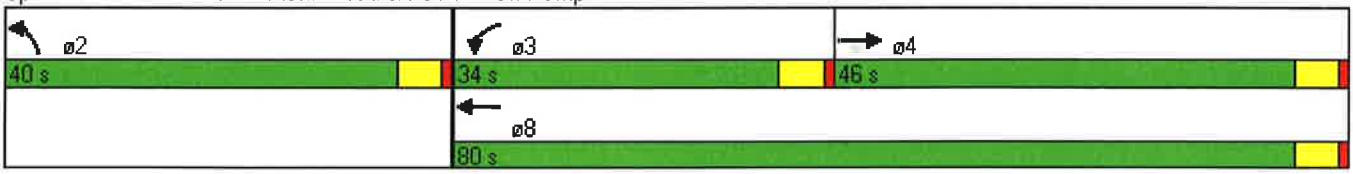


| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 981 | 147 | 553 | 203 | 155 | 722 |
| Turn Type | | Perm | Prot | | | Free |
| Protected Phases | 4 | | 3 | 8 | 2 | |
| Permitted Phases | | 4 | | | | Free |
| Detector Phase | 4 | 4 | 3 | 8 | 2 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Minimum Split (s) | 40.0 | 40.0 | 25.0 | 40.0 | 25.0 | |
| Total Split (s) | 46.0 | 46.0 | 34.0 | 80.0 | 40.0 | 0.0 |
| Total Split (%) | 38.3% | 38.3% | 28.3% | 66.7% | 33.3% | 0.0% |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 4.0 |
| Lead/Lag | Lag | Lag | Lead | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | | | |
| Recall Mode | None | None | None | None | None | |
| Act Effct Green (s) | 41.4 | 41.4 | 21.5 | 67.9 | 14.8 | 92.8 |
| Actuated g/C Ratio | 0.45 | 0.45 | 0.23 | 0.73 | 0.16 | 1.00 |
| v/c Ratio | 1.23 | 0.21 | 0.76 | 0.16 | 0.63 | 0.48 |
| Control Delay | 140.7 | 11.8 | 40.6 | 4.6 | 47.6 | 0.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 140.7 | 11.8 | 40.6 | 4.6 | 47.6 | 0.9 |
| LOS | F | B | D | A | D | A |
| Approach Delay | 123.9 | | | 30.9 | 9.2 | |
| Approach LOS | F | | | C | A | |

**Intersection Summary**

Cycle Length: 120
Actuated Cycle Length: 92.8
Natural Cycle: 120
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.23
Intersection Signal Delay: 62.4 — Intersection LOS: E
Intersection Capacity Utilization 88.5% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 9: N. Plank Road & I-84 WB Off Ramp

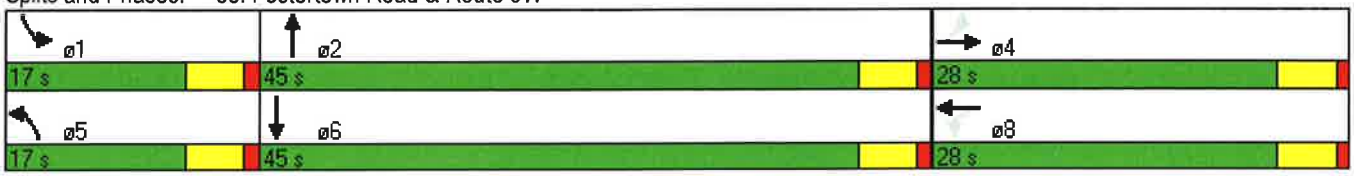


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | |
| Volume (vph) | 123 | 162 | 36 | 20 | 75 | 834 | 44 | 953 |
| Turn Type | Perm | | Perm | | Prot | | Prot | |
| Protected Phases | | 4 | | 8 | 5 | 2 | 1 | 6 |
| Permitted Phases | 4 | | 8 | | | | | |
| 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 |
| Minimum Split (s) | 15.0 | 15.0 | 25.0 | 25.0 | 15.0 | 25.0 | 15.0 | 25.0 |
| Total Split (s) | 28.0 | 28.0 | 28.0 | 28.0 | 17.0 | 45.0 | 17.0 | 45.0 |
| Total Split (%) | 31.1% | 31.1% | 31.1% | 31.1% | 18.9% | 50.0% | 18.9% | 50.0% |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | Lead | Lag | Lead | Lag |
| Lead-Lag Optimize? | | | | | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | None | None |
| Act Effct Green (s) | | 23.1 | | 23.1 | 9.2 | 43.8 | 7.8 | 40.2 |
| Actuated g/C Ratio | | 0.27 | | 0.27 | 0.11 | 0.51 | 0.09 | 0.47 |
| v/c Ratio | | 1.45 | | 0.28 | 0.45 | 1.02 | 0.30 | 1.39 |
| Control Delay | | 241.8 | | 28.8 | 44.5 | 59.5 | 41.9 | 206.2 |
| Queue Delay | | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | | 241.8 | | 28.8 | 44.5 | 59.5 | 41.9 | 206.2 |
| LOS | | F | | C | D | E | D | F |
| Approach Delay | | 241.8 | | 28.8 | | 58.3 | | 199.2 |
| Approach LOS | | F | | C | | E | | F |

**Intersection Summary**

Cycle Length: 90
Actuated Cycle Length: 85.1
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.45
Intersection Signal Delay: 156.2 — Intersection LOS: F
Intersection Capacity Utilization 99.0% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 38: Fostertown Road & Route 9W

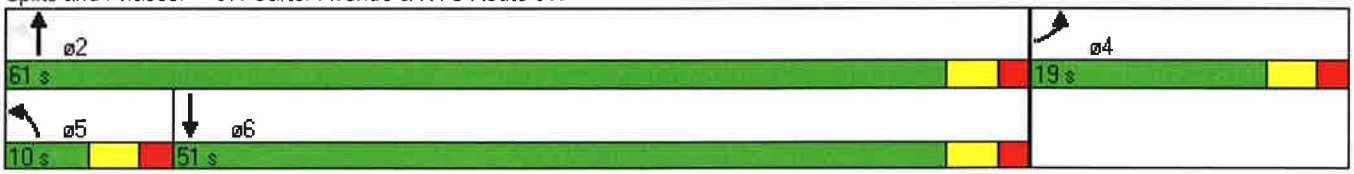


| Lane Group | EBL | NBL | NBT | SBT |
|---|---|---|---|---|
| Lane Configurations | | | | |
| Volume (vph) | 27 | 92 | 822 | 939 |
| Turn Type | | pm+pt | | |
| Protected Phases | 4 | 5 | 2 | 6 |
| Permitted Phases | | 2 | | |
| Detector Phase | 4 | 5 | 2 | 6 |
| Switch Phase | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 9.0 | 9.0 | 9.0 | 9.0 |
| Total Split (s) | 19.0 | 10.0 | 61.0 | 51.0 |
| Total Split (%) | 23.8% | 12.5% | 76.3% | 63.8% |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | Lead | | Lag |
| Lead-Lag Optimize? | | Yes | | Yes |
| Recall Mode | None | None | Min | Min |
| Act Effct Green (s) | 13.1 | 54.3 | 54.3 | 46.6 |
| Actuated g/C Ratio | 0.17 | 0.70 | 0.70 | 0.60 |
| v/c Ratio | 0.92 | 0.55 | 0.75 | 0.98 |
| Control Delay | 46.2 | 18.5 | 12.1 | 41.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 46.2 | 18.5 | 12.1 | 41.5 |
| LOS | D | B | B | D |
| Approach Delay | 46.2 | | 12.7 | 41.5 |
| Approach LOS | D | | B | D |

**Intersection Summary**

Cycle Length: 80
Actuated Cycle Length: 77.5
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 30.0 — Intersection LOS: C
Intersection Capacity Utilization 87.9% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 57: Carter Avenue & NYS Route 9W

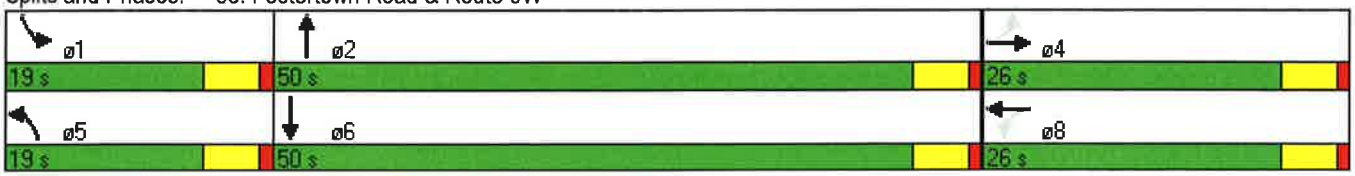


| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT |
|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | |
| Volume (vph) | 83 | 35 | 22 | 96 | 151 | 1224 | 48 | 797 |
| Turn Type | Perm | | Perm | | Prot | | Prot | |
| Protected Phases | | 4 | | 8 | 5 | 2 | 1 | 6 |
| Permitted Phases | 4 | | 8 | | | | | |
| 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 |
| Minimum Split (s) | 15.0 | 15.0 | 25.0 | 25.0 | 15.0 | 45.0 | 15.0 | 45.0 |
| Total Split (s) | 26.0 | 26.0 | 26.0 | 26.0 | 19.0 | 50.0 | 19.0 | 50.0 |
| Total Split (%) | 27.4% | 27.4% | 27.4% | 27.4% | 20.0% | 52.6% | 20.0% | 52.6% |
| Yellow Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | | | | Lead | Lag | Lead | Lag |
| Lead-Lag Optimize? | | | | | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | None | None |
| Act Effct Green (s) | | 17.9 | | 17.9 | 12.3 | 54.4 | 7.9 | 45.2 |
| Actuated g/C Ratio | | 0.20 | | 0.20 | 0.14 | 0.60 | 0.09 | 0.50 |
| v/c Ratio | | 0.86 | | 0.50 | 0.70 | 1.23 | 0.31 | 1.04 |
| Control Delay | | 58.1 | | 36.1 | 54.6 | 133.1 | 44.9 | 68.1 |
| Queue Delay | | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | | 58.1 | | 36.1 | 54.6 | 133.1 | 44.9 | 68.1 |
| LOS | | E | | D | D | F | D | E |
| Approach Delay | | 58.1 | | 36.1 | | 124.6 | | 66.9 |
| Approach LOS | | E | | D | | F | | E |

**Intersection Summary**

Cycle Length: 95
Actuated Cycle Length: 90.5
Natural Cycle: 145
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.23
Intersection Signal Delay: 94.2 — Intersection LOS: F
Intersection Capacity Utilization 99.7% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 38: Fostertown Road & Route 9W

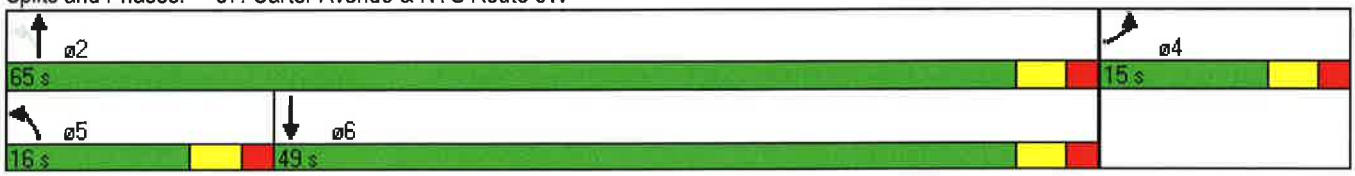


| Lane Group | EBL | NBL | NBT | SBT |
|---|---|---|---|---|
| Lane Configurations | | | | |
| Volume (vph) | 35 | 263 | 1108 | 859 |
| Turn Type | | pm+pt | | |
| Protected Phases | 4 | 5 | 2 | 6 |
| Permitted Phases | | 2 | | |
| Detector Phase | 4 | 5 | 2 | 6 |
| Switch Phase | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 9.0 | 9.0 | 9.0 | 9.0 |
| Total Split (s) | 15.0 | 16.0 | 65.0 | 49.0 |
| Total Split (%) | 18.8% | 20.0% | 81.3% | 61.3% |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 |
| Lead/Lag | | Lead | | Lag |
| Lead-Lag Optimize? | | Yes | | Yes |
| Recall Mode | None | None | Min | Min |
| Act Effct Green (s) | 7.7 | 57.8 | 57.8 | 41.7 |
| Actuated g/C Ratio | 0.10 | 0.77 | 0.77 | 0.55 |
| v/c Ratio | 0.69 | 0.82 | 0.84 | 0.93 |
| Control Delay | 21.4 | 38.3 | 13.4 | 33.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 21.4 | 38.3 | 13.4 | 33.7 |
| LOS | C | D | B | C |
| Approach Delay | 21.4 | | 18.2 | 33.7 |
| Approach LOS | C | | B | C |

**Intersection Summary**

Cycle Length: 80
Actuated Cycle Length: 75.5
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 24.1 — Intersection LOS: C
Intersection Capacity Utilization 83.6% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 57: Carter Avenue & NYS Route 9W




APPROXIMATE SIGHT TRIANGLE

PHOTO 45

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|---|---|---|---|---|---|
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APPROXIMATE SIGHT TRIANGLE

PHOTO 29

PHOTO 32

PHOTO 33

PHOTO 28

| | | | | | |
|---|---|---|---|---|---|
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## APPROXIMATE SIGHT TRIANGLE


PHOTO 26

PHOTO 25

PHOTO 24


APPROXIMATE SIGHT TRIANGLE

PHOTO 66

PHOTO 63


PHOTO 67

PHOTO 67

PHOTO 60

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|---|---|---|---|---|---|
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