TAB THREE

PROPOSED PEAK HOUR INTERSECTION

LEVEL OF SERVICE ANALYSES

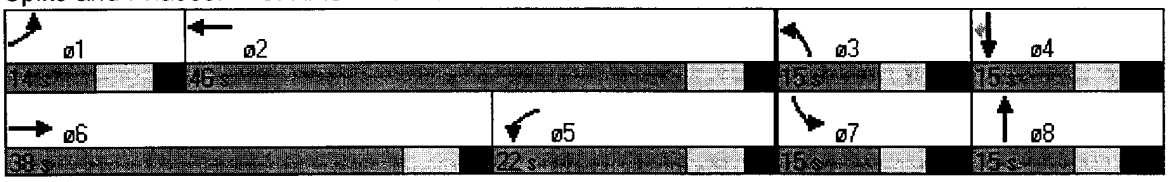
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 300 | | 0 | 290 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 2 | | 0 | 1 | | 0 | 2 | | 0 | 1 | | 1 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Leading Detector (ft) | 50 | 50 | | 50 | 50 | | 50 | 50 | | 50 | 50 | 50 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Lane Util. Factor | 0.97 | 0.86 | 0.86 | 1.00 | 0.86 | 0.86 | 0.97 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Frt | | 0.987 | | | 0.991 | | | 0.855 | | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | 0.950 | |
| Satd. Flow (prot) | 3433 | 6325 | 0 | 1770 | 6350 | 0 | 3433 | 1593 | 0 | 1681 | 1681 | 1583 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | 0.655 | |
| Satd. Flow (perm) | 3433 | 6325 | 0 | 1770 | 6350 | 0 | 3433 | 1593 | 0 | 1681 | 1159 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 26 | | | 19 | | | 96 | | | | 8 |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Link Speed (mph) | | 30 | | | 30 | | | 30 | | | 30 | |
| Link Distance (ft) | | 209 | | | 316 | | | 422 | | | 492 | |
| Travel Time (s) | | 4.8 | | | 7.2 | | | 9.6 | | | 11.2 | |
| Volume (vph) | 58 | 1513 | 138 | 178 | 662 | 41 | 156 | 3 | 88 | 19 | 0 | 7 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 63 | 1645 | 150 | 193 | 720 | 45 | 170 | 3 | 96 | 21 | 0 | 8 |
| Lane Group Flow (vph) | 63 | 1795 | 0 | 193 | 765 | 0 | 170 | 99 | 0 | 11 | 10 | 8 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | | | | | | | | | | 4 |
| Detector Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | 4 |
| Minimum Initial (s) | 7.0 | 15.0 | | 7.0 | 15.0 | | 7.0 | 7.0 | | 7.0 | 7.0 | 7.0 |
| Minimum Split (s) | 14.0 | 32.0 | | 14.0 | 24.0 | | 15.0 | 15.0 | | 15.0 | 15.0 | 15.0 |
| Total Split (s) | 14.0 | 38.0 | 0.0 | 22.0 | 46.0 | 0.0 | 15.0 | 15.0 | 0.0 | 15.0 | 15.0 | 15.0 |
| Total Split (%) | 15.6% | 42.2% | 0.0% | 24.4% | 51.1% | 0.0% | 16.7% | 16.7% | 0.0% | 16.7% | 16.7% | 16.7% |
| Maximum Green (s) | 7.0 | 31.0 | | 15.0 | 39.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | 8.0 |
| Yellow Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 2.5 | 2.5 | | 2.5 | 2.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | 3.5 |
| Lead/Lag | Lead | Lead | | Lag | Lag | | Lead | Lag | | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes |
| Vehicle Extension (s) | 1.5 | 2.5 | | 1.5 | 2.5 | | 1.5 | 1.5 | | 1.5 | 1.5 | 1.5 |
| Recall Mode | None | Max | | None | C-Max | | None | None | | None | None | None |
| Walk Time (s) | | 5.0 | | | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 20.0 | | | 12.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Act Effct Green (s) | 10.0 | 43.4 | | 18.0 | 54.2 | | 10.6 | 13.8 | | 10.0 | 2.0 | 10.6 |
| Actuated g/C Ratio | 0.11 | 0.48 | | 0.20 | 0.60 | | 0.12 | 0.15 | | 0.11 | 0.02 | 0.12 |
| v/c Ratio | 0.17 | 0.59 | | 0.55 | 0.20 | | 0.42 | 0.30 | | 0.06 | 0.27 | 0.04 |
| Control Delay | 37.4 | 18.9 | | 27.5 | 4.9 | | 40.2 | 10.4 | | 36.8 | 53.0 | 20.4 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay | 37.4 | 18.9 | | 27.5 | 4.9 | | 40.2 | 10.4 | | 36.8 | 53.0 | 20.4 |
| LOS | D | B | | C | A | | D | B | | D | D | C |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Delay | | 19.5 | | | 9.4 | | | 29.2 | | | 37.9 | |
| Approach LOS | | B | | | A | | | C | | | D | |

**Intersection Summary**

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 12 (13%), Referenced to phase 2:WBT, Start of Red
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.59
Intersection Signal Delay: 17.4 Intersection LOS: B
Intersection Capacity Utilization 55.2% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: NASA Rd 1 & Second St



| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Turning Speed (mph) | | 9 | 15 | | 15 | 9 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.983 | | | | 0.986 | |
| Flt Protected | | | | | 0.957 | |
| Satd. Flow (prot) | 1831 | 0 | 0 | 1863 | 1758 | 0 |
| Flt Permitted | | | | | 0.957 | |
| Satd. Flow (perm) | 1831 | 0 | 0 | 1863 | 1758 | 0 |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Link Speed (mph) | 30 | | | 30 | 30 | |
| Link Distance (ft) | 167 | | | 1080 | 160 | |
| Travel Time (s) | 3.8 | | | 24.5 | 3.6 | |
| Volume (vph) | 241 | 34 | 0 | 217 | 122 | 14 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 262 | 37 | 0 | 236 | 133 | 15 |
| Lane Group Flow (vph) | 299 | 0 | 0 | 236 | 148 | 0 |
| Sign Control | Free | | | Free | Stop | |

**Intersection Summary**

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 29.0% ICU Level of Service A
Analysis Period (min) 15

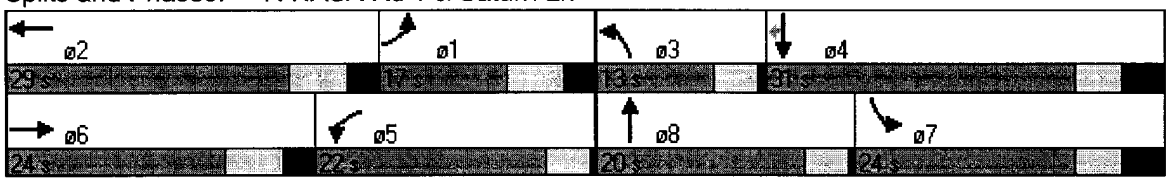
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 300 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 2 | | 0 | 1 | | 0 | 1 | | 0 | 2 | | 1 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Leading Detector (ft) | 50 | 50 | | 50 | 50 | | 50 | 50 | | 50 | 50 | 50 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Lane Util. Factor | 0.97 | 0.86 | 0.86 | 1.00 | 0.86 | 0.86 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 | 0.95 |
| Frt | | 0.989 | | | 0.949 | | | 0.850 | | | 0.921 | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 3433 | 6337 | 0 | 1770 | 6081 | 0 | 1770 | 1583 | 0 | 3433 | 1630 | 1504 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 3433 | 6337 | 0 | 1770 | 6081 | 0 | 1770 | 1583 | 0 | 3433 | 1630 | 1504 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 17 | | | 143 | | | 298 | | | 61 | 107 |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Link Speed (mph) | | 30 | | | 30 | | | 30 | | | 30 | |
| Link Distance (ft) | | 333 | | | 304 | | | 175 | | | 310 | |
| Travel Time (s) | | 7.6 | | | 6.9 | | | 4.0 | | | 7.0 | |
| Volume (vph) | 362 | 1088 | 84 | 253 | 663 | 341 | 75 | 0 | 20 | 330 | 51 | 155 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 393 | 1183 | 91 | 275 | 721 | 371 | 82 | 0 | 22 | 359 | 55 | 168 |
| Lane Group Flow (vph) | 393 | 1274 | 0 | 275 | 1092 | 0 | 82 | 22 | 0 | 359 | 116 | 107 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | | | | | | | | | | 4 |
| Detector Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | 4 |
| Minimum Initial (s) | 7.0 | 15.0 | | 4.0 | 15.0 | | 4.0 | 4.0 | | 7.0 | 7.0 | 7.0 |
| Minimum Split (s) | 14.0 | 23.0 | | 8.0 | 28.0 | | 8.0 | 20.0 | | 24.0 | 24.0 | 24.0 |
| Total Split (s) | 17.0 | 24.0 | 0.0 | 22.0 | 29.0 | 0.0 | 13.0 | 20.0 | 0.0 | 24.0 | 31.0 | 31.0 |
| Total Split (%) | 18.9% | 26.7% | 0.0% | 24.4% | 32.2% | 0.0% | 14.4% | 22.2% | 0.0% | 26.7% | 34.4% | 34.4% |
| Maximum Green (s) | 10.0 | 17.0 | | 18.0 | 22.0 | | 9.0 | 16.0 | | 17.0 | 24.0 | 24.0 |
| Yellow Time (s) | 4.5 | 4.5 | | 3.5 | 4.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 2.5 | 2.5 | | 0.5 | 2.5 | | 0.5 | 0.5 | | 3.5 | 3.5 | 3.5 |
| Lead/Lag | Lag | Lead | | Lag | Lead | | Lead | Lead | | Lag | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes |
| Vehicle Extension (s) | 2.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 2.0 | 2.0 | 2.0 |
| Recall Mode | None | None | | None | C-Max | | None | None | | None | None | None |
| Walk Time (s) | | | | | 5.0 | | | 5.0 | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | | 16.0 | | | 11.0 | | 12.0 | 12.0 | 12.0 |
| Pedestrian Calls (#/hr) | | | | | 0 | | | 0 | | 0 | 0 | 0 |
| Act Effct Green (s) | 13.0 | 36.9 | | 18.0 | 41.9 | | 8.1 | 5.5 | | 19.3 | 12.9 | 12.9 |
| Actuated g/C Ratio | 0.14 | 0.41 | | 0.20 | 0.47 | | 0.09 | 0.06 | | 0.21 | 0.14 | 0.14 |
| v/c Ratio | 0.79 | 0.49 | | 0.78 | 0.38 | | 0.51 | 0.06 | | 0.49 | 0.41 | 0.35 |
| Control Delay | 50.1 | 5.9 | | 52.5 | 4.2 | | 50.3 | 0.3 | | 33.2 | 22.1 | 10.1 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay | 50.1 | 5.9 | | 52.5 | 4.2 | | 50.3 | 0.3 | | 33.2 | 22.1 | 10.1 |
| LOS | D | A | | D | A | | D | A | | C | C | B |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Delay | | 16.4 | | | 13.9 | | | 39.8 | | | 26.7 | |
| Approach LOS | | B | | | B | | | D | | | C | |

**Intersection Summary**

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 8 (9%), Referenced to phase 2:WBT, Start of Red
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 17.7 Intersection LOS: B
Intersection Capacity Utilization 57.3% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 7: NASA Rd 1 & Saturn Ln



| 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 |
| Storage Length (ft) | 300 | | 0 | 282 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 2 | | 0 | 1 | | 0 | 1 | | 1 | 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 | 4.0 | 4.0 |
| Leading Detector (ft) | 50 | 50 | | 50 | 50 | | 50 | 50 | 50 | | | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | | | |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Lane Util. Factor | 0.97 | 0.86 | 0.86 | 1.00 | 0.91 | 1.00 | 0.95 | 0.91 | 0.95 | 1.00 | 1.00 | 1.00 |
| Frt | | 0.978 | | | | | | 0.961 | 0.850 | | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | 0.982 | | | | |
| Satd. Flow (prot) | 3433 | 6267 | 0 | 1770 | 5085 | 0 | 1681 | 1600 | 1504 | 0 | 0 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | 0.982 | | | | |
| Satd. Flow (perm) | 3433 | 6267 | 0 | 1770 | 5085 | 0 | 1681 | 1600 | 1504 | 0 | 0 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 53 | | | | | | 18 | 120 | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Link Speed (mph) | | 30 | | | 30 | | | 30 | | | 30 | |
| Link Distance (ft) | | 303 | | | 456 | | | 432 | | | 305 | |
| Travel Time (s) | | 6.9 | | | 10.4 | | | 9.8 | | | 6.9 | |
| Volume (vph) | 272 | 946 | 158 | 207 | 1131 | 0 | 127 | 37 | 136 | 0 | 0 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 296 | 1028 | 172 | 225 | 1229 | 0 | 138 | 40 | 148 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 296 | 1200 | 0 | 225 | 1229 | 0 | 98 | 108 | 120 | 0 | 0 | 0 |
| Turn Type | Prot | | | Prot | | | Perm | | Perm | | | |
| Protected Phases | 1 | 6 | | 5 | 2 | | | 3 | | | | |
| Permitted Phases | | | | | | | 3 | | 3 | | | |
| Detector Phases | 1 | 6 | | 5 | 2 | | 3 | 3 | 3 | | | |
| Minimum Initial (s) | 7.0 | 15.0 | | 7.0 | 15.0 | | 7.0 | 7.0 | 7.0 | | | |
| Minimum Split (s) | 14.5 | 32.0 | | 14.5 | 24.5 | | 16.0 | 16.0 | 16.0 | | | |
| Total Split (s) | 23.1 | 36.7 | 0.0 | 30.3 | 43.9 | 0.0 | 23.0 | 23.0 | 23.0 | 0.0 | 0.0 | 0.0 |
| Total Split (%) | 25.7% | 40.8% | 0.0% | 33.7% | 48.8% | 0.0% | 25.6% | 25.6% | 25.6% | 0.0% | 0.0% | 0.0% |
| Maximum Green (s) | 16.6 | 30.2 | | 23.8 | 37.4 | | 16.5 | 16.5 | 16.5 | | | |
| Yellow Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 3.5 | 3.5 | 3.5 | | | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 3.0 | 3.0 | 3.0 | | | |
| Lead/Lag | Lag | Lag | | Lead | Lead | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Vehicle Extension (s) | 2.0 | 3.0 | | 2.0 | 3.0 | | 2.0 | 2.0 | 2.0 | | | |
| Recall Mode | None | None | | None | C-Max | | None | None | None | | | |
| Walk Time (s) | | 5.0 | | | 5.0 | | 5.0 | 5.0 | 5.0 | | | |
| Flash Dont Walk (s) | | 20.5 | | | 11.0 | | 4.5 | 4.5 | 4.5 | | | |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | 0 | 0 | 0 | | | |
| Act Effct Green (s) | 15.2 | 48.0 | | 17.7 | 50.5 | | 12.3 | 12.3 | 12.3 | | | |
| Actuated g/C Ratio | 0.17 | 0.53 | | 0.20 | 0.56 | | 0.14 | 0.14 | 0.14 | | | |
| v/c Ratio | 0.51 | 0.36 | | 0.65 | 0.43 | | 0.43 | 0.46 | 0.39 | | | |
| Control Delay | 23.7 | 3.0 | | 41.6 | 13.0 | | 40.7 | 35.5 | 10.4 | | | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | | |
| Total Delay | 23.7 | 3.0 | | 41.6 | 13.0 | | 40.7 | 35.5 | 10.4 | | | |
| LOS | C | A | | D | B | | D | D | B | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Delay | | 7.1 | | | 17.4 | | | 27.8 | | | | |
| Approach LOS | | A | | | B | | | C | | | | |

**Intersection Summary**

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 88 (98%), Referenced to phase 2:WBT, Start of Red

Natural Cycle: 65

Control Type: Actuated-Coordinated

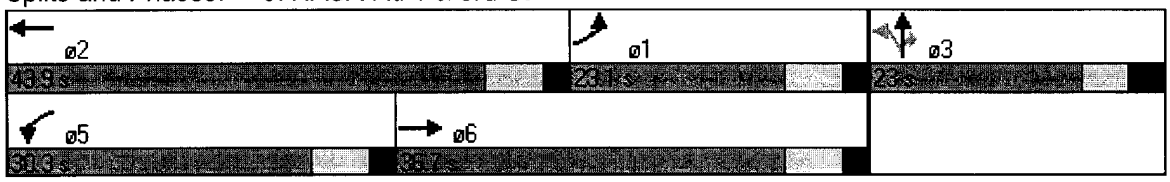
Maximum v/c Ratio: 0.65

Intersection Signal Delay: 13.7 Intersection LOS: B

Intersection Capacity Utilization 45.5% ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 8: NASA Rd 1 & 3rd 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 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 100 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Lane Util. Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Frt | | 0.955 | | | 0.942 | | | 0.975 | | | 0.951 | |
| Flt Protected | | 0.989 | | | 0.997 | | | 0.991 | | 0.950 | | |
| Satd. Flow (prot) | 0 | 3343 | 0 | 0 | 3324 | 0 | 0 | 3420 | 0 | 1770 | 3366 | 0 |
| Flt Permitted | | 0.989 | | | 0.997 | | | 0.991 | | 0.950 | | |
| Satd. Flow (perm) | 0 | 3343 | 0 | 0 | 3324 | 0 | 0 | 3420 | 0 | 1770 | 3366 | 0 |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Link Speed (mph) | | 30 | | | 30 | | | 30 | | | 30 | |
| Link Distance (ft) | | 229 | | | 167 | | | 229 | | | 422 | |
| Travel Time (s) | | 5.2 | | | 3.8 | | | 5.2 | | | 9.6 | |
| Volume (vph) | 77 | 156 | 100 | 19 | 180 | 126 | 20 | 71 | 18 | 101 | 57 | 28 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 84 | 170 | 109 | 21 | 196 | 137 | 22 | 77 | 20 | 110 | 62 | 30 |
| Lane Group Flow (vph) | 0 | 363 | 0 | 0 | 354 | 0 | 0 | 119 | 0 | 110 | 92 | 0 |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |
| Intersection Capacity Utilization 41.6% | ICU Level of Service A |
| Analysis Period (min) 15 | |

| 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 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 100 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Lane Util. Factor | 0.95 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Frt | | 0.927 | | | 0.919 | | | | | | 0.949 | |
| Flt Protected | | 0.979 | | | | | | 0.988 | | 0.950 | | |
| Satd. Flow (prot) | 0 | 3212 | 0 | 0 | 1712 | 0 | 0 | 3497 | 0 | 1770 | 3359 | 0 |
| Flt Permitted | | 0.979 | | | | | | 0.988 | | 0.950 | | |
| Satd. Flow (perm) | 0 | 3212 | 0 | 0 | 1712 | 0 | 0 | 3497 | 0 | 1770 | 3359 | 0 |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Link Speed (mph) | | 30 | | | 30 | | | 30 | | | 30 | |
| Link Distance (ft) | | 1080 | | | 94 | | | 527 | | | 432 | |
| Travel Time (s) | | 24.5 | | | 2.1 | | | 12.0 | | | 9.8 | |
| Volume (vph) | 51 | 10 | 58 | 0 | 2 | 3 | 74 | 229 | 1 | 26 | 235 | 120 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 55 | 11 | 63 | 0 | 2 | 3 | 80 | 249 | 1 | 28 | 255 | 130 |
| Lane Group Flow (vph) | 0 | 129 | 0 | 0 | 5 | 0 | 0 | 330 | 0 | 28 | 385 | 0 |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |
| Intersection Capacity Utilization 38.3% | ICU Level of Service A |
| Analysis Period (min) 15 | |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Turning Speed (mph) | | 9 | 15 | | 15 | 9 |
| Lane Util. Factor | 0.86 | 0.86 | 1.00 | 0.86 | 1.00 | 1.00 |
| Frt | 0.984 | | | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 6305 | 0 | 0 | 6408 | 0 | 1611 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 6305 | 0 | 0 | 6408 | 0 | 1611 |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Link Speed (mph) | 30 | | | 30 | 30 | |
| Link Distance (ft) | 316 | | | 333 | 215 | |
| Travel Time (s) | 7.2 | | | 7.6 | 4.9 | |
| Volume (vph) | 1451 | 169 | 0 | 893 | 0 | 103 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 1577 | 184 | 0 | 971 | 0 | 112 |
| Lane Group Flow (vph) | 1761 | 0 | 0 | 971 | 0 | 112 |
| Sign Control | Free | | | Free | Stop | |

**Intersection Summary**

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 36.9% ICU Level of Service A
Analysis Period (min) 15

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | ↑↑↑↑ | | | ↑↑↑↑ | | ↱ |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Turning Speed (mph) | | 9 | 15 | | 15 | 9 |
| Lane Util. Factor | 0.86 | 0.86 | 1.00 | 0.86 | 1.00 | 1.00 |
| Frt | 0.995 | | | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 6376 | 0 | 0 | 6408 | 0 | 1611 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 6376 | 0 | 0 | 6408 | 0 | 1611 |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Link Speed (mph) | 30 | | | 30 | 30 | |
| Link Distance (ft) | 304 | | | 303 | 153 | |
| Travel Time (s) | 6.9 | | | 6.9 | 3.5 | |
| Volume (vph) | 1387 | 51 | 0 | 1258 | 0 | 41 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 1508 | 55 | 0 | 1367 | 0 | 45 |
| Lane Group Flow (vph) | 1563 | 0 | 0 | 1367 | 0 | 45 |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Control Type: Unsignalized | | | |
| Intersection Capacity Utilization 30.9% | | ICU Level of Service A | |
| Analysis Period (min) 15 | | | |

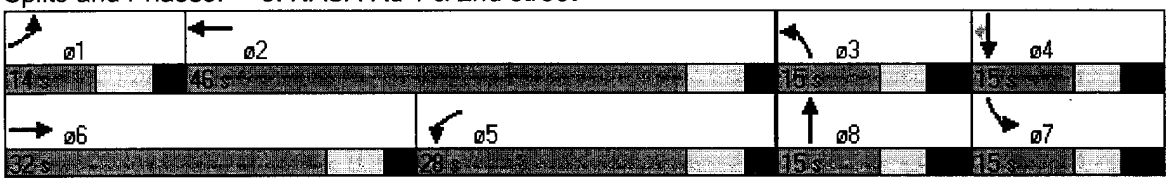
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 300 | | 0 | 290 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 2 | | 0 | 1 | | 0 | 2 | | 0 | 1 | | 1 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Leading Detector (ft) | 50 | 50 | | 50 | 50 | | 50 | 50 | | 50 | 50 | 50 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Lane Util. Factor | 0.97 | 0.86 | 0.86 | 1.00 | 0.86 | 0.86 | 0.97 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Frt | | 0.984 | | | 0.997 | | | 0.856 | | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | 0.960 | |
| Satd. Flow (prot) | 3433 | 6305 | 0 | 1770 | 6389 | 0 | 3433 | 1595 | 0 | 1681 | 1699 | 1583 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | 0.000 | |
| Satd. Flow (perm) | 3433 | 6305 | 0 | 1770 | 6389 | 0 | 3433 | 1595 | 0 | 1681 | 0 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 35 | | | 5 | | | 159 | | | | 23 |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Link Speed (mph) | | 45 | | | 45 | | | 30 | | | 30 | |
| Link Distance (ft) | | 209 | | | 316 | | | 422 | | | 492 | |
| Travel Time (s) | | 3.2 | | | 4.8 | | | 9.6 | | | 11.2 | |
| Volume (vph) | 20 | 963 | 119 | 341 | 1057 | 19 | 151 | 6 | 146 | 75 | 7 | 21 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 22 | 1047 | 129 | 371 | 1149 | 21 | 164 | 7 | 159 | 82 | 8 | 23 |
| Lane Group Flow (vph) | 22 | 1176 | 0 | 371 | 1170 | 0 | 164 | 166 | 0 | 44 | 46 | 23 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | | | | | | | | | | 4 |
| Detector Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | 4 |
| Minimum Initial (s) | 7.0 | 15.0 | | 7.0 | 15.0 | | 7.0 | 7.0 | | 7.0 | 7.0 | 7.0 |
| Minimum Split (s) | 14.0 | 32.0 | | 14.0 | 24.0 | | 15.0 | 15.0 | | 15.0 | 15.0 | 15.0 |
| Total Split (s) | 14.0 | 32.0 | 0.0 | 28.0 | 46.0 | 0.0 | 15.0 | 15.0 | 0.0 | 15.0 | 15.0 | 15.0 |
| Total Split (%) | 15.6% | 35.6% | 0.0% | 31.1% | 51.1% | 0.0% | 16.7% | 16.7% | 0.0% | 16.7% | 16.7% | 16.7% |
| Maximum Green (s) | 7.0 | 25.0 | | 21.0 | 39.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | 8.0 |
| Yellow Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 2.5 | 2.5 | | 2.5 | 2.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | 3.5 |
| Lead/Lag | Lead | Lead | | Lag | Lag | | Lead | Lead | | Lag | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes |
| Vehicle Extension (s) | 1.5 | 2.5 | | 1.5 | 2.5 | | 1.5 | 1.5 | | 1.5 | 1.5 | 1.5 |
| Recall Mode | None | Max | | None | C-Max | | None | None | | None | None | None |
| Walk Time (s) | | 5.0 | | | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | | 20.0 | | | 12.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Pedestrian Calls (#/hr) | | 0 | | | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Act Effct Green (s) | 10.0 | 31.2 | | 24.0 | 53.6 | | 10.6 | 13.4 | | 11.0 | 7.0 | 11.0 |
| Actuated g/C Ratio | 0.11 | 0.35 | | 0.27 | 0.60 | | 0.12 | 0.15 | | 0.12 | 0.08 | 0.12 |
| v/c Ratio | 0.06 | 0.53 | | 0.79 | 0.31 | | 0.41 | 0.45 | | 0.21 | 0.35 | 0.11 |
| Control Delay | 36.3 | 24.8 | | 38.6 | 8.0 | | 39.9 | 11.3 | | 38.2 | 42.9 | 15.9 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay | 36.3 | 24.8 | | 38.6 | 8.0 | | 39.9 | 11.3 | | 38.2 | 42.9 | 15.9 |
| LOS | D | C | | D | A | | D | B | | D | D | B |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Delay | | 25.0 | | | 15.4 | | | 25.6 | | | 35.6 | |
| Approach LOS | | C | | | B | | | C | | | D | |

**Intersection Summary**

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 19 (21%), Referenced to phase 2:WBT, Start of Red
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 20.8 Intersection LOS: C
Intersection Capacity Utilization 63.3% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: NASA Rd 1 & 2nd street



| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Turning Speed (mph) | | 9 | 15 | | 15 | 9 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 0.955 | | | | 0.985 | |
| Flt Protected | | | | | 0.957 | |
| Satd. Flow (prot) | 1779 | 0 | 0 | 1863 | 1756 | 0 |
| Flt Permitted | | | | | 0.957 | |
| Satd. Flow (perm) | 1779 | 0 | 0 | 1863 | 1756 | 0 |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Link Speed (mph) | 30 | | | 30 | 30 | |
| Link Distance (ft) | 167 | | | 1080 | 160 | |
| Travel Time (s) | 3.8 | | | 24.5 | 3.6 | |
| Volume (vph) | 245 | 123 | 0 | 298 | 59 | 7 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 266 | 134 | 0 | 324 | 64 | 8 |
| Lane Group Flow (vph) | 400 | 0 | 0 | 324 | 72 | 0 |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |
| Intersection Capacity Utilization 30.8% | ICU Level of Service A |
| Analysis Period (min) 15 | |

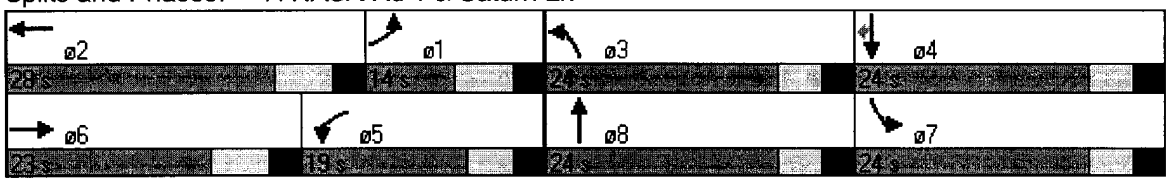
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 300 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 2 | | 0 | 1 | | 0 | 1 | | 0 | 2 | | 1 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Leading Detector (ft) | 50 | 50 | | 50 | 50 | | 50 | 50 | | 50 | 50 | 50 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Lane Util. Factor | 0.97 | 0.86 | 0.86 | 1.00 | 0.86 | 0.86 | 1.00 | 1.00 | 1.00 | 0.97 | 0.95 | 0.95 |
| Frt | | 0.992 | | | 0.938 | | | 0.850 | | | 0.868 | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 3433 | 6357 | 0 | 1770 | 6011 | 0 | 1770 | 1583 | 0 | 3433 | 1536 | 1504 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 3433 | 6357 | 0 | 1770 | 6011 | 0 | 1770 | 1583 | 0 | 3433 | 1536 | 1504 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 11 | | | 195 | | | 198 | | | 209 | 215 |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Link Speed (mph) | | 45 | | | 45 | | | 30 | | | 30 | |
| Link Distance (ft) | | 333 | | | 304 | | | 175 | | | 310 | |
| Travel Time (s) | | 5.0 | | | 4.6 | | | 4.0 | | | 7.0 | |
| Volume (vph) | 268 | 856 | 46 | 137 | 636 | 454 | 348 | 0 | 94 | 571 | 27 | 390 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 291 | 930 | 50 | 149 | 691 | 493 | 378 | 0 | 102 | 621 | 29 | 424 |
| Lane Group Flow (vph) | 291 | 980 | 0 | 149 | 1184 | 0 | 378 | 102 | 0 | 621 | 238 | 215 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | | | | | | | | | | 4 |
| Detector Phases | 1 | 6 | | 5 | 2 | | 3 | 8 | | 7 | 4 | 4 |
| Minimum Initial (s) | 7.0 | 15.0 | | 4.0 | 15.0 | | 4.0 | 4.0 | | 7.0 | 7.0 | 7.0 |
| Minimum Split (s) | 14.0 | 23.0 | | 10.0 | 28.0 | | 10.0 | 22.0 | | 24.0 | 24.0 | 24.0 |
| Total Split (s) | 14.0 | 23.0 | 0.0 | 19.0 | 28.0 | 0.0 | 24.0 | 24.0 | 0.0 | 24.0 | 24.0 | 24.0 |
| Total Split (%) | 15.6% | 25.6% | 0.0% | 21.1% | 31.1% | 0.0% | 26.7% | 26.7% | 0.0% | 26.7% | 26.7% | 26.7% |
| Maximum Green (s) | 7.0 | 16.0 | | 13.0 | 21.0 | | 18.0 | 18.0 | | 18.0 | 18.0 | 18.0 |
| Yellow Time (s) | 4.5 | 4.5 | | 3.5 | 4.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 2.5 | 2.5 | | 2.5 | 2.5 | | 2.5 | 2.5 | | 2.5 | 2.5 | 2.5 |
| Lead/Lag | Lag | Lead | | Lag | Lead | | Lead | Lead | | Lag | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes |
| Vehicle Extension (s) | 2.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 2.0 | 2.0 | 2.0 |
| Recall Mode | None | None | | None | C-Max | | None | None | | None | None | None |
| Walk Time (s) | | | | | 5.0 | | | 5.0 | | | 5.0 | 5.0 |
| Flash Dont Walk (s) | | | | | 16.0 | | | 11.0 | | | 12.0 | 12.0 |
| Pedestrian Calls (#/hr) | | | | | 0 | | | 0 | | | 0 | 0 |
| Act Effct Green (s) | 10.0 | 26.8 | | 15.0 | 31.8 | | 20.0 | 7.5 | | 27.0 | 12.2 | 12.2 |
| Actuated g/C Ratio | 0.11 | 0.30 | | 0.17 | 0.35 | | 0.22 | 0.08 | | 0.30 | 0.14 | 0.14 |
| v/c Ratio | 0.76 | 0.52 | | 0.51 | 0.53 | | 0.96 | 0.33 | | 0.60 | 0.61 | 0.55 |
| Control Delay | 49.7 | 10.4 | | 36.4 | 15.7 | | 73.4 | 2.8 | | 30.0 | 14.4 | 10.5 |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Delay | 49.7 | 10.4 | | 36.4 | 15.7 | | 73.4 | 2.8 | | 30.0 | 14.4 | 10.5 |
| LOS | D | B | | D | B | | E | A | | C | B | B |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Delay | | 19.4 | | | 18.0 | | | 58.4 | | | 22.6 | |
| Approach LOS | | B | | | B | | | E | | | C | |

**Intersection Summary**

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 7 (8%), Referenced to phase 2:WBT, Start of Red
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 24.3 Intersection LOS: C
Intersection Capacity Utilization 66.5% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 7: NASA Rd 1 & Saturn Ln

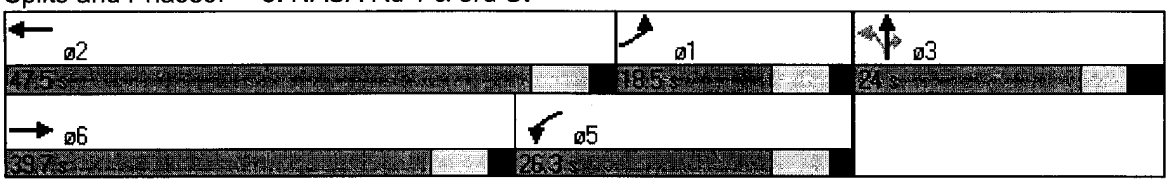


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Approach Delay | | 5.0 | | | 12.1 | | | 20.3 | | | | |
| Approach LOS | | A | | | B | | | C | | | | |

**Intersection Summary**

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 18 (20%), Referenced to phase 2:WBT, Start of Red
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 9.7 Intersection LOS: A
Intersection Capacity Utilization 52.7% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 8: NASA Rd 1 & 3rd 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 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 100 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Lane Util. Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Frt | | 0.940 | | | 0.942 | | | 0.982 | | | 0.982 | |
| Flt Protected | | 0.996 | | | 0.995 | | | 0.974 | | 0.950 | | |
| Satd. Flow (prot) | 0 | 3314 | 0 | 0 | 3317 | 0 | 0 | 3385 | 0 | 1770 | 3476 | 0 |
| Flt Permitted | | 0.996 | | | 0.995 | | | 0.974 | | 0.950 | | |
| Satd. Flow (perm) | 0 | 3314 | 0 | 0 | 3317 | 0 | 0 | 3385 | 0 | 1770 | 3476 | 0 |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Link Speed (mph) | | 30 | | | 30 | | | 30 | | | 30 | |
| Link Distance (ft) | | 229 | | | 167 | | | 229 | | | 422 | |
| Travel Time (s) | | 5.2 | | | 3.8 | | | 5.2 | | | 9.6 | |
| Volume (vph) | 27 | 163 | 128 | 42 | 198 | 152 | 144 | 89 | 32 | 173 | 251 | 35 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 29 | 177 | 139 | 46 | 215 | 165 | 157 | 97 | 35 | 188 | 273 | 38 |
| Lane Group Flow (vph) | 0 | 345 | 0 | 0 | 426 | 0 | 0 | 289 | 0 | 188 | 311 | 0 |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |
| Intersection Capacity Utilization 51.9% | ICU Level of Service A |
| Analysis Period (min) 15 | |

| 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 |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 100 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Lane Util. Factor | 0.95 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Frt | | 0.961 | | | 0.964 | | | 0.999 | | | 0.962 | |
| Flt Protected | | 0.965 | | | 0.993 | | | 0.978 | | 0.950 | | |
| Satd. Flow (prot) | 0 | 3282 | 0 | 0 | 1783 | 0 | 0 | 3458 | 0 | 1770 | 3405 | 0 |
| Flt Permitted | | 0.965 | | | 0.993 | | | 0.978 | | 0.950 | | |
| Satd. Flow (perm) | 0 | 3282 | 0 | 0 | 1783 | 0 | 0 | 3458 | 0 | 1770 | 3405 | 0 |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Link Speed (mph) | | 30 | | | 30 | | | 30 | | | 30 | |
| Link Distance (ft) | | 1080 | | | 94 | | | 527 | | | 432 | |
| Travel Time (s) | | 24.5 | | | 2.1 | | | 12.0 | | | 9.8 | |
| Volume (vph) | 185 | 4 | 67 | 2 | 8 | 4 | 205 | 241 | 2 | 33 | 254 | 85 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 201 | 4 | 73 | 2 | 9 | 4 | 223 | 262 | 2 | 36 | 276 | 92 |
| Lane Group Flow (vph) | 0 | 278 | 0 | 0 | 15 | 0 | 0 | 487 | 0 | 36 | 368 | 0 |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

**Intersection Summary**

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 49.3% ICU Level of Service A
Analysis Period (min) 15

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | ↑↑↑↑↱ | | | ↑↑↑↑ | | ↱ |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Turning Speed (mph) | | 9 | 15 | | 15 | 9 |
| Lane Util. Factor | 0.86 | 0.86 | 1.00 | 0.86 | 1.00 | 1.00 |
| Frt | 0.988 | | | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 6331 | 0 | 0 | 6408 | 0 | 1611 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 6331 | 0 | 0 | 6408 | 0 | 1611 |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Link Speed (mph) | 45 | | | 45 | 30 | |
| Link Distance (ft) | 316 | | | 333 | 167 | |
| Travel Time (s) | 4.8 | | | 5.0 | 3.8 | |
| Volume (vph) | 1093 | 91 | 0 | 1374 | 0 | 77 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 1188 | 99 | 0 | 1493 | 0 | 84 |
| Lane Group Flow (vph) | 1287 | 0 | 0 | 1493 | 0 | 84 |
| Sign Control | Free | | | Free | Stop | |

**Intersection Summary**

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 28.8% ICU Level of Service A
Analysis Period (min) 15

| Lane Group | EBL | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Turning Speed (mph) | | 9 | 15 | | 15 | 9 |
| Lane Util. Factor | 0.86 | 0.86 | 1.00 | 0.86 | 1.00 | 1.00 |
| Frt | 0.997 | | | | | 0.865 |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 6389 | 0 | 0 | 6408 | 0 | 1611 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 6389 | 0 | 0 | 6408 | 0 | 1611 |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Link Speed (mph) | 45 | | | 45 | 30 | |
| Link Distance (ft) | 304 | | | 303 | 157 | |
| Travel Time (s) | 4.6 | | | 4.6 | 3.6 | |
| Volume (vph) | 1494 | 27 | 0 | 1158 | 0 | 188 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 1624 | 29 | 0 | 1259 | 0 | 204 |
| Lane Group Flow (vph) | 1653 | 0 | 0 | 1259 | 0 | 204 |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |
| Intersection Capacity Utilization 40.4% | ICU Level of Service A |
| Analysis Period (min) 15 | |