# Appendix C

## Synchro Level of Service Calculations – Existing Conditions

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | | | 1.00 | 0.85 | | 0.95 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (prot) | 1770 | 3483 | | 1770 | 3531 | | | 1814 | 1583 | | 1748 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (perm) | 1770 | 3483 | | 1770 | 3531 | | | 1814 | 1583 | | 1748 | |
| Volume (vph) | 27 | 737 | 88 | 125 | 674 | 10 | 88 | 75 | 106 | 27 | 48 | 46 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 27 | 737 | 88 | 125 | 674 | 10 | 88 | 75 | 106 | 27 | 48 | 46 |
| RTOR Reduction (vph) | 0 | 8 | 0 | 0 | 1 | 0 | 0 | 0 | 95 | 0 | 23 | 0 |
| Lane Group Flow (vph) | 27 | 817 | 0 | 125 | 683 | 0 | 0 | 163 | 11 | 0 | 98 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | Over | Split | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 2.9 | 26.6 | | 9.3 | 33.0 | | | 26.5 | 9.3 | | 8.7 | |
| Effective Green, g (s) | 2.9 | 26.6 | | 9.3 | 33.0 | | | 26.5 | 9.3 | | 8.7 | |
| Actuated g/C Ratio | 0.03 | 0.31 | | 0.11 | 0.38 | | | 0.30 | 0.11 | | 0.10 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 59 | 1064 | | 189 | 1338 | | | 552 | 169 | | 175 | |
| v/s Ratio Prot | 0.02 | c0.23 | | c0.07 | 0.19 | | | c0.09 | 0.01 | | c0.06 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.46 | 0.77 | | 0.66 | 0.51 | | | 0.30 | 0.07 | | 0.56 | |
| Uniform Delay, d1 | 41.3 | 27.5 | | 37.4 | 20.8 | | | 23.2 | 35.0 | | 37.4 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 5.5 | 3.4 | | 8.4 | 0.3 | | | 1.4 | 0.2 | | 3.8 | |
| Delay (s) | 46.9 | 30.8 | | 45.8 | 21.2 | | | 24.5 | 35.2 | | 41.2 | |
| Level of Service | D | C | | D | C | | | C | D | | D | |
| Approach Delay (s) | | 31.3 | | | 25.0 | | | 28.7 | | | 41.2 | |
| Approach LOS | | C | | | C | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 29.1 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.55 | | |
| Actuated Cycle Length (s) | 87.1 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 55.6% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 35 | 875 | 6 | 35 | 812 | 30 | 1 | 0 | 5 | 21 | 1 | 25 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 35 | 875 | 6 | 35 | 812 | 30 | 1 | 0 | 5 | 21 | 1 | 25 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 824 | | | 792 | | | | | | | |
| pX, platoon unblocked | 0.85 | | | 0.83 | | | 0.91 | 0.91 | 0.83 | 0.91 | 0.91 | 0.85 |
| vC, conflicting volume | 842 | | | 881 | | | 1450 | 1860 | 440 | 1410 | 1848 | 421 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 640 | | | 655 | | | 900 | 1353 | 126 | 856 | 1340 | 145 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 96 | | | 95 | | | 99 | 100 | 99 | 90 | 99 | 97 |
| cM capacity (veh/h) | 801 | | | 772 | | | 190 | 123 | 750 | 211 | 125 | 746 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 35 | 583 | 298 | 35 | 541 | 301 | 6 | 47 |
| Volume Left | 35 | 0 | 0 | 35 | 0 | 0 | 1 | 21 |
| Volume Right | 0 | 0 | 6 | 0 | 0 | 30 | 5 | 25 |
| cSH | 801 | 1700 | 1700 | 772 | 1700 | 1700 | 503 | 334 |
| Volume to Capacity | 0.04 | 0.34 | 0.18 | 0.05 | 0.32 | 0.18 | 0.01 | 0.14 |
| Queue Length 95th (ft) | 3 | 0 | 0 | 4 | 0 | 0 | 1 | 12 |
| Control Delay (s) | 9.7 | 0.0 | 0.0 | 9.9 | 0.0 | 0.0 | 12.2 | 17.6 |
| Lane LOS | A | | | A | | | B | C |
| Approach Delay (s) | 0.4 | | | 0.4 | | | 12.2 | 17.6 |
| Approach LOS | | | | | | | B | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.9 | | |
| Intersection Capacity Utilization | 41.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 0.95 | | 0.88 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (prot) | 3539 | 1583 | 1770 | 3539 | | 2787 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (perm) | 3539 | 1583 | 1770 | 3539 | | 2787 |
| Volume (vph) | 745 | 184 | 190 | 878 | 0 | 84 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 745 | 184 | 190 | 878 | 0 | 84 |
| RTOR Reduction (vph) | 0 | 107 | 0 | 0 | 0 | 49 |
| Lane Group Flow (vph) | 745 | 77 | 190 | 878 | 0 | 35 |
| Turn Type | | custom | Prot | | | custom |
| Protected Phases | 4 | 2 | 3 | 8 | | 2 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 23.7 | 35.6 | 14.2 | 41.9 | | 35.6 |
| Effective Green, g (s) | 23.7 | 35.6 | 14.2 | 41.9 | | 35.6 |
| Actuated g/C Ratio | 0.28 | 0.42 | 0.17 | 0.49 | | 0.42 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 981 | 659 | 294 | 1734 | | 1160 |
| v/s Ratio Prot | c0.21 | c0.05 | c0.11 | 0.25 | | 0.01 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.76 | 0.12 | 0.65 | 0.51 | | 0.03 |
| Uniform Delay, d1 | 28.3 | 15.3 | 33.3 | 14.8 | | 14.7 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 3.4 | 0.4 | 4.8 | 0.2 | | 0.0 |
| Delay (s) | 31.7 | 15.7 | 38.1 | 15.0 | | 14.8 |
| Level of Service | C | B | D | B | | B |
| Approach Delay (s) | 28.5 | | | 19.1 | 14.8 | |
| Approach LOS | C | | | B | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 23.2 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.43 | | |
| Actuated Cycle Length (s) | 85.5 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 37.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | 1.00 | 0.97 | 0.91 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 5085 | 1583 | 3433 | 5085 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 5085 | 1583 | 3433 | 5085 | 1583 |
| Volume (vph) | 316 | 364 | 113 | 322 | 602 | 227 | 171 | 2982 | 199 | 122 | 1425 | 200 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor (vph) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 85% | 100% | 100% | 85% | 100% |
| Adj. Flow (vph) | 316 | 364 | 113 | 322 | 602 | 227 | 171 | 2535 | 199 | 122 | 1211 | 200 |
| RTOR Reduction (vph) | 0 | 0 | 105 | 0 | 0 | 154 | 0 | 0 | 45 | 0 | 0 | 94 |
| Lane Group Flow (vph) | 316 | 364 | 8 | 322 | 602 | 73 | 171 | 2535 | 154 | 122 | 1211 | 106 |
| Turn Type | Prot | | Over | Prot | | Over | Prot | | Over | Prot | | Over |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 17.0 | 24.6 | 13.2 | 20.4 | 28.0 | 14.2 | 13.2 | 114.8 | 20.4 | 14.2 | 115.8 | 17.0 |
| Effective Green, g (s) | 17.0 | 24.6 | 13.2 | 20.4 | 28.0 | 14.2 | 13.2 | 114.8 | 20.4 | 14.2 | 115.8 | 17.0 |
| Actuated g/C Ratio | 0.09 | 0.13 | 0.07 | 0.11 | 0.15 | 0.07 | 0.07 | 0.60 | 0.11 | 0.07 | 0.61 | 0.09 |
| Clearance 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 |
| 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 | 3.0 |
| Lane Grp Cap (vph) | 307 | 458 | 110 | 369 | 522 | 118 | 239 | 3072 | 170 | 257 | 3099 | 142 |
| v/s Ratio Prot | c0.09 | 0.10 | 0.00 | 0.09 | c0.17 | 0.05 | c0.05 | c0.50 | 0.10 | 0.04 | 0.24 | 0.07 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 1.03 | 0.79 | 0.07 | 0.87 | 1.15 | 0.62 | 0.72 | 0.83 | 0.91 | 0.47 | 0.39 | 0.75 |
| Uniform Delay, d1 | 86.5 | 80.3 | 82.7 | 83.5 | 81.0 | 85.3 | 86.6 | 29.7 | 83.9 | 84.3 | 19.0 | 84.4 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.94 | 1.24 | 1.12 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 59.1 | 9.2 | 0.3 | 19.7 | 89.1 | 9.8 | 8.1 | 2.2 | 37.7 | 1.4 | 0.4 | 19.2 |
| Delay (s) | 145.6 | 89.5 | 82.9 | 103.2 | 170.1 | 95.1 | 89.6 | 39.2 | 131.7 | 85.7 | 19.4 | 103.6 |
| Level of Service | F | F | F | F | F | F | F | D | F | F | B | F |
| Approach Delay (s) | | 110.9 | | | 136.6 | | | 48.5 | | | 35.7 | |
| Approach LOS | | F | | | F | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 69.0 | HCM Level of Service | E |
| HCM Volume to Capacity ratio | 0.89 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 96.3% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 1.00 | | 1.00 | 0.97 | 0.91 | | 1.00 | 0.91 | 1.00 |
| Frt | 1.00 | | 0.85 | 1.00 | | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 5083 | | 1770 | 5085 | 1583 |
| Flt Permitted | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 5083 | | 1770 | 5085 | 1583 |
| Volume (vph) | 132 | 0 | 111 | 12 | 0 | 12 | 445 | 3103 | 8 | 10 | 1569 | 364 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor (vph) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 85% | 100% | 100% | 85% | 100% |
| Adj. Flow (vph) | 132 | 0 | 111 | 12 | 0 | 12 | 445 | 2638 | 8 | 10 | 1334 | 364 |
| RTOR Reduction (vph) | 0 | 0 | 94 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 63 |
| Lane Group Flow (vph) | 132 | 0 | 17 | 12 | 0 | 0 | 445 | 2646 | 0 | 10 | 1334 | 301 |
| Turn Type | custom | | Over | custom | | Over | Prot | | | Prot | | Perm |
| Protected Phases | | | 5 | | | 1 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 6 |
| Actuated Green, G (s) | 12.0 | | 28.6 | 12.0 | | 4.3 | 28.6 | 161.7 | | 4.3 | 137.4 | 137.4 |
| Effective Green, g (s) | 12.0 | | 28.6 | 12.0 | | 4.3 | 28.6 | 161.7 | | 4.3 | 137.4 | 137.4 |
| Actuated g/C Ratio | 0.06 | | 0.15 | 0.06 | | 0.02 | 0.15 | 0.85 | | 0.02 | 0.72 | 0.72 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 217 | | 238 | 112 | | 36 | 517 | 4326 | | 40 | 3677 | 1145 |
| v/s Ratio Prot | | | 0.01 | | | 0.00 | c0.13 | c0.52 | | 0.01 | 0.26 | |
| v/s Ratio Perm | c0.04 | | | 0.01 | | | | | | | | 0.19 |
| v/c Ratio | 0.61 | | 0.07 | 0.11 | | 0.01 | 0.86 | 0.61 | | 0.25 | 0.36 | 0.26 |
| Uniform Delay, d1 | 86.7 | | 69.3 | 83.9 | | 90.8 | 78.8 | 4.4 | | 91.3 | 9.9 | 9.0 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 0.94 | 0.77 | 0.49 |
| Incremental Delay, d2 | 4.8 | | 0.1 | 0.4 | | 0.1 | 13.7 | 0.7 | | 2.9 | 0.2 | 0.5 |
| Delay (s) | 91.5 | | 69.4 | 84.4 | | 90.8 | 92.5 | 5.0 | | 89.1 | 7.8 | 4.9 |
| Level of Service | F | | E | F | | F | F | A | | F | A | A |
| Approach Delay (s) | | 81.4 | | | 87.6 | | | 17.6 | | | 7.7 | |
| Approach LOS | | F | | | F | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 17.7 | HCM Level of Service | B |
| HCM Volume to Capacity ratio | 0.65 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 75.3% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Volume (veh/h) | 4 | 3 | 392 | 102 | 17 | 206 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 4 | 3 | 392 | 102 | 17 | 206 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | 692 |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 683 | 443 | | | 494 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 683 | 443 | | | 494 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 99 | 100 | | | 98 | |
| cM capacity (veh/h) | 408 | 615 | | | 1070 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 7 | 494 | 17 | 206 |
| Volume Left | 4 | 0 | 17 | 0 |
| Volume Right | 3 | 102 | 0 | 0 |
| cSH | 477 | 1700 | 1070 | 1700 |
| Volume to Capacity | 0.01 | 0.29 | 0.02 | 0.12 |
| Queue Length 95th (ft) | 1 | 0 | 1 | 0 |
| Control Delay (s) | 12.7 | 0.0 | 8.4 | 0.0 |
| Lane LOS | B | | A | |
| Approach Delay (s) | 12.7 | 0.0 | 0.6 | |
| Approach LOS | B | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.3 | | |
| Intersection Capacity Utilization | 36.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 2 | 45 | 16 | 1 | 12 | 2 | 0 | 0 | 0 | 6 | 16 | 9 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 2 | 45 | 16 | 1 | 12 | 2 | 0 | 0 | 0 | 6 | 16 | 9 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 63 | 15 | 0 | 31 |
| Volume Left (vph) | 2 | 1 | 0 | 6 |
| Volume Right (vph) | 16 | 2 | 0 | 9 |
| Hadj (s) | -0.11 | -0.03 | 0.00 | -0.10 |
| Departure Headway (s) | 3.9 | 4.0 | 4.1 | 4.0 |
| Degree Utilization, x | 0.07 | 0.02 | 0.00 | 0.03 |
| Capacity (veh/h) | 916 | 888 | 871 | 888 |
| Control Delay (s) | 7.1 | 7.1 | 7.1 | 7.1 |
| Approach Delay (s) | 7.1 | 7.1 | 0.0 | 7.1 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.1 | | |
| HCM Level of Service | A | | |
| Intersection Capacity Utilization | 13.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 3433 | 3471 | | 3433 | 3539 | 1583 | 3433 | 4996 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 3433 | 3471 | | 3433 | 3539 | 1583 | 3433 | 4996 | |
| Volume (vph) | 137 | 557 | 266 | 233 | 560 | 82 | 276 | 921 | 345 | 140 | 769 | 102 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 137 | 557 | 266 | 233 | 560 | 82 | 276 | 921 | 345 | 140 | 769 | 102 |
| RTOR Reduction (vph) | 0 | 0 | 232 | 0 | 10 | 0 | 0 | 0 | 256 | 0 | 14 | 0 |
| Lane Group Flow (vph) | 137 | 557 | 34 | 233 | 632 | 0 | 276 | 921 | 89 | 140 | 857 | 0 |
| Turn Type | Prot | | Over | Prot | | | Prot | | Over | Prot | | |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 13.6 | 32.0 | 14.1 | 7.0 | 25.4 | | 14.1 | 45.3 | 7.0 | 9.7 | 40.9 | |
| Effective Green, g (s) | 13.6 | 32.0 | 14.1 | 7.0 | 25.4 | | 14.1 | 45.3 | 7.0 | 9.7 | 40.9 | |
| Actuated g/C Ratio | 0.12 | 0.29 | 0.13 | 0.06 | 0.23 | | 0.13 | 0.41 | 0.06 | 0.09 | 0.37 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 219 | 1030 | 203 | 218 | 801 | | 440 | 1457 | 101 | 303 | 1858 | |
| v/s Ratio Prot | c0.08 | 0.16 | 0.02 | c0.07 | c0.18 | | c0.08 | c0.26 | 0.06 | 0.04 | 0.17 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.63 | 0.54 | 0.17 | 1.07 | 0.79 | | 0.63 | 0.63 | 0.88 | 0.46 | 0.46 | |
| Uniform Delay, d1 | 45.8 | 32.8 | 42.7 | 51.5 | 39.8 | | 45.5 | 25.7 | 51.1 | 47.7 | 26.2 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 5.5 | 0.6 | 0.4 | 80.4 | 5.2 | | 2.8 | 2.1 | 54.1 | 1.1 | 0.8 | |
| Delay (s) | 51.3 | 33.4 | 43.1 | 131.9 | 45.0 | | 48.2 | 27.8 | 105.2 | 48.8 | 27.0 | |
| Level of Service | D | C | D | F | D | | D | C | F | D | C | |
| Approach Delay (s) | | 38.6 | | | 68.1 | | | 48.8 | | | 30.0 | |
| Approach LOS | | D | | | E | | | D | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 46.1 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.68 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 70.3% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Volume (veh/h) | 13 | 917 | 795 | 21 | 8 | 22 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 13 | 917 | 795 | 21 | 8 | 22 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | 516 | | | |
| pX, platoon unblocked | 0.86 | | | | 0.86 | 0.86 |
| vC, conflicting volume | 816 | | | | 1280 | 398 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 628 | | | | 1165 | 144 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 98 | | | | 95 | 97 |
| cM capacity (veh/h) | 820 | | | | 159 | 758 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | SB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 13 | 458 | 458 | 398 | 398 | 21 | 30 |
| Volume Left | 13 | 0 | 0 | 0 | 0 | 0 | 8 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 21 | 22 |
| cSH | 820 | 1700 | 1700 | 1700 | 1700 | 1700 | 378 |
| Volume to Capacity | 0.02 | 0.27 | 0.27 | 0.23 | 0.23 | 0.01 | 0.08 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 0 | 0 | 6 |
| Control Delay (s) | 9.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15.3 |
| Lane LOS | A | | | | | | C |
| Approach Delay (s) | 0.1 | | | 0.0 | | | 15.3 |
| Approach LOS | | | | | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.3 | | |
| Intersection Capacity Utilization | 35.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 20 | 997 | 0 | 0 | 811 | 10 | 0 | 0 | 4 | 13 | 0 | 38 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 20 | 997 | 0 | 0 | 811 | 10 | 0 | 0 | 4 | 13 | 0 | 38 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 561 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.88 | | | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | |
| vC, conflicting volume | 821 | | | 997 | | | 1480 | 1858 | 498 | 1354 | 1848 | 406 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 821 | | | 860 | | | 1410 | 1839 | 293 | 1265 | 1827 | 406 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 100 | | | 100 | 100 | 99 | 88 | 100 | 94 |
| cM capacity (veh/h) | 804 | | | 684 | | | 80 | 64 | 618 | 108 | 65 | 595 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 20 | 498 | 498 | 406 | 406 | 10 | 4 | 51 |
| Volume Left | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 10 | 4 | 38 |
| cSH | 804 | 1700 | 1700 | 1700 | 1700 | 1700 | 618 | 277 |
| Volume to Capacity | 0.02 | 0.29 | 0.29 | 0.24 | 0.24 | 0.01 | 0.01 | 0.18 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| Control Delay (s) | 9.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.9 | 20.9 |
| Lane LOS | A | | | | | | B | C |
| Approach Delay (s) | 0.2 | | | 0.0 | | | 10.9 | 20.9 |
| Approach LOS | | | | | | | B | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.7 | | |
| Intersection Capacity Utilization | 44.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.94 | | 1.00 | 0.94 | | 1.00 | 0.97 | | 1.00 | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3319 | | 1770 | 3309 | | 1770 | 1816 | | 1770 | 1786 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3319 | | 1770 | 3309 | | 1770 | 1816 | | 1770 | 1786 | |
| Volume (vph) | 147 | 97 | 69 | 115 | 233 | 178 | 60 | 209 | 42 | 33 | 105 | 40 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 147 | 97 | 69 | 115 | 233 | 178 | 60 | 209 | 42 | 33 | 105 | 40 |
| RTOR Reduction (vph) | 0 | 57 | 0 | 0 | 137 | 0 | 0 | 5 | 0 | 0 | 10 | 0 |
| Lane Group Flow (vph) | 147 | 109 | 0 | 115 | 274 | 0 | 60 | 246 | 0 | 33 | 135 | 0 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 9.5 | 13.6 | | 8.4 | 12.5 | | 5.0 | 35.5 | | 2.9 | 33.4 | |
| Effective Green, g (s) | 9.5 | 13.6 | | 8.4 | 12.5 | | 5.0 | 35.5 | | 2.9 | 33.4 | |
| Actuated g/C Ratio | 0.12 | 0.18 | | 0.11 | 0.16 | | 0.07 | 0.46 | | 0.04 | 0.44 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 220 | 591 | | 195 | 541 | | 116 | 844 | | 67 | 781 | |
| v/s Ratio Prot | c0.08 | 0.03 | | 0.06 | c0.08 | | c0.03 | c0.14 | | 0.02 | 0.08 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.67 | 0.18 | | 0.59 | 0.51 | | 0.52 | 0.29 | | 0.49 | 0.17 | |
| Uniform Delay, d1 | 31.9 | 26.7 | | 32.4 | 29.1 | | 34.5 | 12.7 | | 36.0 | 13.1 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 7.5 | 0.2 | | 4.5 | 0.7 | | 3.9 | 0.9 | | 5.6 | 0.5 | |
| Delay (s) | 39.4 | 26.8 | | 36.9 | 29.9 | | 38.4 | 13.5 | | 41.6 | 13.6 | |
| Level of Service | D | C | | D | C | | D | B | | D | B | |
| Approach Delay (s) | | 32.7 | | | 31.4 | | | 18.3 | | | 18.8 | |
| Approach LOS | | C | | | C | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 27.0 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.39 | | |
| Actuated Cycle Length (s) | 76.4 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 53.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | | | 1.00 | 0.85 | | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.98 | |
| Satd. Flow (prot) | 1770 | 3479 | | 1770 | 3525 | | | 1805 | 1583 | | 1754 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.98 | |
| Satd. Flow (perm) | 1770 | 3479 | | 1770 | 3525 | | | 1805 | 1583 | | 1754 | |
| Volume (vph) | 17 | 533 | 68 | 68 | 558 | 15 | 74 | 41 | 106 | 28 | 33 | 29 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 17 | 533 | 68 | 68 | 558 | 15 | 74 | 41 | 106 | 28 | 33 | 29 |
| RTOR Reduction (vph) | 0 | 9 | 0 | 0 | 1 | 0 | 0 | 0 | 97 | 0 | 18 | 0 |
| Lane Group Flow (vph) | 17 | 592 | 0 | 68 | 572 | 0 | 0 | 115 | 9 | 0 | 72 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | Over | Split | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 1.3 | 20.4 | | 6.7 | 25.8 | | | 26.8 | 6.7 | | 7.8 | |
| Effective Green, g (s) | 1.3 | 20.4 | | 6.7 | 25.8 | | | 26.8 | 6.7 | | 7.8 | |
| Actuated g/C Ratio | 0.02 | 0.26 | | 0.09 | 0.33 | | | 0.34 | 0.09 | | 0.10 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 30 | 913 | | 153 | 1170 | | | 623 | 137 | | 176 | |
| v/s Ratio Prot | 0.01 | c0.17 | | c0.04 | 0.16 | | | c0.06 | 0.01 | | c0.04 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.57 | 0.65 | | 0.44 | 0.49 | | | 0.18 | 0.07 | | 0.41 | |
| Uniform Delay, d1 | 37.9 | 25.5 | | 33.7 | 20.7 | | | 17.8 | 32.6 | | 32.8 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 22.3 | 1.6 | | 2.1 | 0.3 | | | 0.7 | 0.2 | | 1.5 | |
| Delay (s) | 60.2 | 27.1 | | 35.8 | 21.0 | | | 18.5 | 32.8 | | 34.3 | |
| Level of Service | E | C | | D | C | | | B | C | | C | |
| Approach Delay (s) | | 28.0 | | | 22.6 | | | 25.4 | | | 34.3 | |
| Approach LOS | | C | | | C | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 25.8 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.39 | | |
| Actuated Cycle Length (s) | 77.7 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 44.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 22 | 654 | 2 | 20 | 662 | 32 | 2 | 4 | 38 | 15 | 0 | 15 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 22 | 654 | 2 | 20 | 662 | 32 | 2 | 4 | 38 | 15 | 0 | 15 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 824 | | | 792 | | | | | | | |
| pX, platoon unblocked | 0.92 | | | 0.92 | | | 0.96 | 0.96 | 0.92 | 0.96 | 0.96 | 0.92 |
| vC, conflicting volume | 694 | | | 656 | | | 1085 | 1433 | 328 | 1129 | 1418 | 347 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 579 | | | 535 | | | 792 | 1156 | 178 | 838 | 1140 | 202 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 98 | | | 99 | 98 | 95 | 93 | 100 | 98 |
| cM capacity (veh/h) | 911 | | | 944 | | | 253 | 179 | 766 | 224 | 183 | 740 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 22 | 436 | 220 | 20 | 441 | 253 | 44 | 30 |
| Volume Left | 22 | 0 | 0 | 20 | 0 | 0 | 2 | 15 |
| Volume Right | 0 | 0 | 2 | 0 | 0 | 32 | 38 | 15 |
| cSH | 911 | 1700 | 1700 | 944 | 1700 | 1700 | 551 | 344 |
| Volume to Capacity | 0.02 | 0.26 | 0.13 | 0.02 | 0.26 | 0.15 | 0.08 | 0.09 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 2 | 0 | 0 | 6 | 7 |
| Control Delay (s) | 9.1 | 0.0 | 0.0 | 8.9 | 0.0 | 0.0 | 12.1 | 16.5 |
| Lane LOS | A | | | A | | | B | C |
| Approach Delay (s) | 0.3 | | | 0.2 | | | 12.1 | 16.5 |
| Approach LOS | | | | | | | B | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.0 | | |
| Intersection Capacity Utilization | 34.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 0.95 | | 0.88 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (prot) | 3539 | 1583 | 1770 | 3539 | | 2787 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (perm) | 3539 | 1583 | 1770 | 3539 | | 2787 |
| Volume (vph) | 641 | 86 | 128 | 621 | 0 | 227 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 641 | 86 | 128 | 621 | 0 | 227 |
| RTOR Reduction (vph) | 0 | 45 | 0 | 0 | 0 | 120 |
| Lane Group Flow (vph) | 641 | 41 | 128 | 621 | 0 | 107 |
| Turn Type | | custom | Prot | | | custom |
| Protected Phases | 4 | 2 | 3 | 8 | | 2 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 19.1 | 36.1 | 9.1 | 32.2 | | 36.1 |
| Effective Green, g (s) | 19.1 | 36.1 | 9.1 | 32.2 | | 36.1 |
| Actuated g/C Ratio | 0.25 | 0.47 | 0.12 | 0.42 | | 0.47 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 886 | 749 | 211 | 1494 | | 1319 |
| v/s Ratio Prot | c0.18 | 0.03 | c0.07 | 0.18 | | c0.04 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.72 | 0.05 | 0.61 | 0.42 | | 0.08 |
| Uniform Delay, d1 | 26.2 | 10.9 | 31.9 | 15.5 | | 11.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 2.9 | 0.1 | 4.9 | 0.2 | | 0.1 |
| Delay (s) | 29.1 | 11.0 | 36.8 | 15.6 | | 11.1 |
| Level of Service | C | B | D | B | | B |
| Approach Delay (s) | 27.0 | | | 19.3 | 11.1 | |
| Approach LOS | C | | | B | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 21.5 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.35 | | |
| Actuated Cycle Length (s) | 76.3 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 32.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.86 | 1.00 | 0.97 | 0.86 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 6408 | 1583 | 3433 | 6408 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 6408 | 1583 | 3433 | 6408 | 1583 |
| Volume (vph) | 315 | 409 | 132 | 326 | 443 | 156 | 187 | 1414 | 274 | 175 | 1536 | 132 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 315 | 409 | 132 | 326 | 443 | 156 | 187 | 1414 | 274 | 175 | 1536 | 132 |
| RTOR Reduction (vph) | 0 | 0 | 121 | 0 | 0 | 142 | 0 | 0 | 139 | 0 | 0 | 62 |
| Lane Group Flow (vph) | 315 | 409 | 11 | 326 | 443 | 14 | 187 | 1414 | 135 | 175 | 1536 | 70 |
| Turn Type | Prot | | Over | Prot | | Over | Prot | | Over | Prot | | Over |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 18.0 | 20.0 | 15.3 | 18.0 | 20.0 | 14.7 | 15.3 | 121.3 | 18.0 | 14.7 | 120.7 | 18.0 |
| Effective Green, g (s) | 18.0 | 20.0 | 15.3 | 18.0 | 20.0 | 14.7 | 15.3 | 121.3 | 18.0 | 14.7 | 120.7 | 18.0 |
| Actuated g/C Ratio | 0.09 | 0.11 | 0.08 | 0.09 | 0.11 | 0.08 | 0.08 | 0.64 | 0.09 | 0.08 | 0.64 | 0.09 |
| Clearance 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 |
| 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 | 3.0 |
| Lane Grp Cap (vph) | 325 | 373 | 127 | 325 | 373 | 122 | 276 | 4091 | 150 | 266 | 4071 | 150 |
| v/s Ratio Prot | 0.09 | 0.12 | 0.01 | c0.09 | c0.13 | 0.01 | c0.05 | 0.22 | 0.09 | 0.05 | c0.24 | 0.04 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.97 | 1.10 | 0.08 | 1.00 | 1.19 | 0.11 | 0.68 | 0.35 | 0.90 | 0.66 | 0.38 | 0.47 |
| Uniform Delay, d1 | 85.7 | 85.0 | 80.9 | 86.0 | 85.0 | 81.6 | 85.0 | 15.9 | 85.1 | 85.2 | 16.6 | 81.5 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.89 | 1.26 | 1.24 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 41.1 | 75.1 | 0.3 | 50.7 | 108.3 | 0.4 | 6.1 | 0.2 | 43.9 | 5.8 | 0.3 | 2.3 |
| Delay (s) | 126.9 | 160.1 | 81.1 | 136.7 | 193.3 | 82.0 | 81.7 | 20.3 | 149.4 | 91.0 | 16.9 | 83.8 |
| Level of Service | F | F | F | F | F | F | F | C | F | F | B | F |
| Approach Delay (s) | | 135.7 | | | 154.6 | | | 45.3 | | | 28.7 | |
| Approach LOS | | F | | | F | | | D | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 72.2 | HCM Level of Service | E |
| HCM Volume to Capacity ratio | 0.56 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 65.2% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 1.00 | | 1.00 | 0.97 | 0.86 | | 1.00 | 0.86 | 1.00 |
| Frt | 1.00 | | 0.85 | 1.00 | | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 6403 | | 1770 | 6408 | 1583 |
| Flt Permitted | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 6403 | | 1770 | 6408 | 1583 |
| Volume (vph) | 326 | 0 | 374 | 14 | 0 | 6 | 271 | 1540 | 8 | 9 | 1906 | 206 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 326 | 0 | 374 | 14 | 0 | 6 | 271 | 1540 | 8 | 9 | 1906 | 206 |
| RTOR Reduction (vph) | 0 | 0 | 335 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 32 |
| Lane Group Flow (vph) | 326 | 0 | 39 | 14 | 0 | 0 | 271 | 1548 | 0 | 9 | 1906 | 174 |
| Turn Type | custom | | Over | custom | | Over | Prot | | | Prot | | Perm |
| Protected Phases | | | 5 | | | 1 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 6 |
| Actuated Green, G (s) | 21.4 | | 19.7 | 21.4 | | 3.0 | 19.7 | 153.6 | | 3.0 | 136.9 | 136.9 |
| Effective Green, g (s) | 21.4 | | 19.7 | 21.4 | | 3.0 | 19.7 | 153.6 | | 3.0 | 136.9 | 136.9 |
| Actuated g/C Ratio | 0.11 | | 0.10 | 0.11 | | 0.02 | 0.10 | 0.81 | | 0.02 | 0.72 | 0.72 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 387 | | 164 | 199 | | 25 | 356 | 5176 | | 28 | 4617 | 1141 |
| v/s Ratio Prot | | | 0.02 | | | 0.00 | c0.08 | 0.24 | | 0.01 | c0.30 | |
| v/s Ratio Perm | c0.09 | | | 0.01 | | | | | | | | 0.11 |
| v/c Ratio | 0.84 | | 0.24 | 0.07 | | 0.00 | 0.76 | 0.30 | | 0.32 | 0.41 | 0.15 |
| Uniform Delay, d1 | 82.6 | | 78.2 | 75.4 | | 92.0 | 82.9 | 4.6 | | 92.5 | 10.6 | 8.3 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.02 | 0.87 | 0.83 |
| Incremental Delay, d2 | 15.2 | | 0.7 | 0.2 | | 0.1 | 9.3 | 0.1 | | 5.9 | 0.2 | 0.3 |
| Delay (s) | 97.9 | | 79.0 | 75.6 | | 92.1 | 92.1 | 4.7 | | 100.5 | 9.4 | 7.2 |
| Level of Service | F | | E | E | | F | F | A | | F | A | A |
| Approach Delay (s) | | 87.8 | | | 80.5 | | | 17.8 | | | 9.6 | |
| Approach LOS | | F | | | F | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 24.8 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.50 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 64.1% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Volume (veh/h) | 31 | 21 | 206 | 15 | 4 | 190 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 31 | 21 | 206 | 15 | 4 | 190 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | 692 |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 412 | 214 | | | 221 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 412 | 214 | | | 221 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 95 | 97 | | | 100 | |
| cM capacity (veh/h) | 595 | 827 | | | 1348 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 52 | 221 | 4 | 190 |
| Volume Left | 31 | 0 | 4 | 0 |
| Volume Right | 21 | 15 | 0 | 0 |
| cSH | 671 | 1700 | 1348 | 1700 |
| Volume to Capacity | 0.08 | 0.13 | 0.00 | 0.11 |
| Queue Length 95th (ft) | 6 | 0 | 0 | 0 |
| Control Delay (s) | 10.8 | 0.0 | 7.7 | 0.0 |
| Lane LOS | B | | A | |
| Approach Delay (s) | 10.8 | 0.0 | 0.2 | |
| Approach LOS | B | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.3 | | |
| Intersection Capacity Utilization | 21.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 13 | 13 | 9 | 0 | 13 | 6 | 7 | 17 | 0 | 1 | 21 | 8 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 13 | 13 | 9 | 0 | 13 | 6 | 7 | 17 | 0 | 1 | 21 | 8 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 35 | 19 | 24 | 30 |
| Volume Left (vph) | 13 | 0 | 7 | 1 |
| Volume Right (vph) | 9 | 6 | 0 | 8 |
| Hadj (s) | -0.05 | -0.16 | 0.09 | -0.12 |
| Departure Headway (s) | 4.0 | 3.9 | 4.1 | 3.9 |
| Degree Utilization, x | 0.04 | 0.02 | 0.03 | 0.03 |
| Capacity (veh/h) | 884 | 906 | 847 | 901 |
| Control Delay (s) | 7.1 | 7.0 | 7.3 | 7.0 |
| Approach Delay (s) | 7.1 | 7.0 | 7.3 | 7.0 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.1 | | |
| HCM Level of Service | A | | |
| Intersection Capacity Utilization | 19.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.97 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 3433 | 3426 | | 3433 | 3539 | 1583 | 3433 | 5011 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 3433 | 3426 | | 3433 | 3539 | 1583 | 3433 | 5011 | |
| Volume (vph) | 118 | 409 | 163 | 251 | 416 | 113 | 188 | 539 | 150 | 84 | 677 | 73 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 118 | 409 | 163 | 251 | 416 | 113 | 188 | 539 | 150 | 84 | 677 | 73 |
| RTOR Reduction (vph) | 0 | 0 | 147 | 0 | 22 | 0 | 0 | 0 | 140 | 0 | 10 | 0 |
| Lane Group Flow (vph) | 118 | 409 | 16 | 251 | 507 | 0 | 188 | 539 | 10 | 84 | 740 | 0 |
| Turn Type | Prot | | Over | Prot | | | Prot | | Over | Prot | | |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 12.4 | 26.5 | 11.1 | 7.0 | 21.1 | | 11.1 | 53.7 | 7.0 | 6.8 | 49.4 | |
| Effective Green, g (s) | 12.4 | 26.5 | 11.1 | 7.0 | 21.1 | | 11.1 | 53.7 | 7.0 | 6.8 | 49.4 | |
| Actuated g/C Ratio | 0.11 | 0.24 | 0.10 | 0.06 | 0.19 | | 0.10 | 0.49 | 0.06 | 0.06 | 0.45 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 200 | 853 | 160 | 218 | 657 | | 346 | 1728 | 101 | 212 | 2250 | |
| v/s Ratio Prot | c0.07 | 0.12 | 0.01 | c0.07 | c0.15 | | c0.05 | 0.15 | 0.01 | 0.02 | c0.15 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.59 | 0.48 | 0.10 | 1.15 | 0.77 | | 0.54 | 0.31 | 0.09 | 0.40 | 0.33 | |
| Uniform Delay, d1 | 46.4 | 35.8 | 44.9 | 51.5 | 42.2 | | 47.0 | 17.0 | 48.5 | 49.6 | 19.6 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 4.6 | 0.4 | 0.3 | 107.8 | 5.6 | | 1.7 | 0.5 | 0.4 | 1.2 | 0.4 | |
| Delay (s) | 51.0 | 36.3 | 45.2 | 159.3 | 47.8 | | 48.8 | 17.5 | 48.9 | 50.8 | 20.0 | |
| Level of Service | D | D | D | F | D | | D | B | D | D | B | |
| Approach Delay (s) | | 40.9 | | | 83.7 | | | 29.6 | | | 23.1 | |
| Approach LOS | | D | | | F | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 43.6 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.52 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 55.7% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Volume (veh/h) | 22 | 597 | 700 | 9 | 8 | 13 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 22 | 597 | 700 | 9 | 8 | 13 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | 516 | | | |
| pX, platoon unblocked | 0.89 | | | | 0.89 | 0.89 |
| vC, conflicting volume | 709 | | | | 1042 | 350 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 549 | | | | 924 | 146 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 98 | | | | 97 | 98 |
| cM capacity (veh/h) | 905 | | | | 233 | 778 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | SB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 22 | 298 | 298 | 350 | 350 | 9 | 21 |
| Volume Left | 22 | 0 | 0 | 0 | 0 | 0 | 8 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 9 | 13 |
| cSH | 905 | 1700 | 1700 | 1700 | 1700 | 1700 | 412 |
| Volume to Capacity | 0.02 | 0.18 | 0.18 | 0.21 | 0.21 | 0.01 | 0.05 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| Control Delay (s) | 9.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 14.2 |
| Lane LOS | A | | | | | | B |
| Approach Delay (s) | 0.3 | | | 0.0 | | | 14.2 |
| Approach LOS | | | | | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 29.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 21 | 631 | 0 | 0 | 730 | 10 | 0 | 0 | 12 | 1 | 0 | 14 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 21 | 631 | 0 | 0 | 730 | 10 | 0 | 0 | 12 | 1 | 0 | 14 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 561 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.92 | | | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | |
| vC, conflicting volume | 740 | | | 631 | | | 1052 | 1413 | 316 | 1100 | 1403 | 365 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 740 | | | 506 | | | 966 | 1359 | 162 | 1017 | 1349 | 365 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 100 | | | 100 | 100 | 98 | 99 | 100 | 98 |
| cM capacity (veh/h) | 862 | | | 967 | | | 184 | 132 | 783 | 170 | 134 | 632 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 21 | 316 | 316 | 365 | 365 | 10 | 12 | 15 |
| Volume Left | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 10 | 12 | 14 |
| cSH | 862 | 1700 | 1700 | 1700 | 1700 | 1700 | 783 | 535 |
| Volume to Capacity | 0.02 | 0.19 | 0.19 | 0.21 | 0.21 | 0.01 | 0.02 | 0.03 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| Control Delay (s) | 9.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 9.7 | 11.9 |
| Lane LOS | A | | | | | | A | B |
| Approach Delay (s) | 0.3 | | | 0.0 | | | 9.7 | 11.9 |
| Approach LOS | | | | | | | A | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.3 | | |
| Intersection Capacity Utilization | 34.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.95 | | 1.00 | 0.96 | | 1.00 | 0.95 | | 1.00 | 0.97 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3353 | | 1770 | 3392 | | 1770 | 1763 | | 1770 | 1804 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3353 | | 1770 | 3392 | | 1770 | 1763 | | 1770 | 1804 | |
| Volume (vph) | 53 | 109 | 59 | 43 | 89 | 34 | 73 | 131 | 73 | 72 | 158 | 42 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 53 | 109 | 59 | 43 | 89 | 34 | 73 | 131 | 73 | 72 | 158 | 42 |
| RTOR Reduction (vph) | 0 | 52 | 0 | 0 | 30 | 0 | 0 | 12 | 0 | 0 | 6 | 0 |
| Lane Group Flow (vph) | 53 | 116 | 0 | 43 | 93 | 0 | 73 | 192 | 0 | 72 | 194 | 0 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 5.0 | 8.9 | | 4.7 | 8.6 | | 5.6 | 39.4 | | 5.6 | 39.4 | |
| Effective Green, g (s) | 5.0 | 8.9 | | 4.7 | 8.6 | | 5.6 | 39.4 | | 5.6 | 39.4 | |
| Actuated g/C Ratio | 0.07 | 0.12 | | 0.06 | 0.12 | | 0.08 | 0.53 | | 0.08 | 0.53 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 119 | 400 | | 112 | 391 | | 133 | 931 | | 133 | 953 | |
| v/s Ratio Prot | c0.03 | c0.03 | | 0.02 | 0.03 | | c0.04 | c0.11 | | 0.04 | 0.11 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.45 | 0.29 | | 0.38 | 0.24 | | 0.55 | 0.21 | | 0.54 | 0.20 | |
| Uniform Delay, d1 | 33.5 | 30.0 | | 33.6 | 30.0 | | 33.3 | 9.3 | | 33.3 | 9.3 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 2.6 | 0.4 | | 2.2 | 0.3 | | 4.6 | 0.5 | | 4.4 | 0.5 | |
| Delay (s) | 36.1 | 30.4 | | 35.7 | 30.3 | | 37.9 | 9.8 | | 37.7 | 9.8 | |
| Level of Service | D | C | | D | C | | D | A | | D | A | |
| Approach Delay (s) | | 31.7 | | | 31.7 | | | 17.2 | | | 17.2 | |
| Approach LOS | | C | | | C | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 23.2 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.26 | | |
| Actuated Cycle Length (s) | 74.6 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 44.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | 1.00 | 0.99 | | 1.00 | 1.00 | | | 1.00 | 0.85 | | 0.97 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (prot) | 1770 | 3489 | | 1770 | 3523 | | | 1813 | 1583 | | 1790 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (perm) | 1770 | 3489 | | 1770 | 3523 | | | 1813 | 1583 | | 1790 | |
| Volume (vph) | 17 | 657 | 68 | 89 | 627 | 20 | 58 | 47 | 90 | 25 | 48 | 17 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 17 | 657 | 68 | 89 | 627 | 20 | 58 | 47 | 90 | 25 | 48 | 17 |
| RTOR Reduction (vph) | 0 | 6 | 0 | 0 | 2 | 0 | 0 | 0 | 82 | 0 | 9 | 0 |
| Lane Group Flow (vph) | 17 | 719 | 0 | 89 | 645 | 0 | 0 | 105 | 8 | 0 | 81 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | Over | Split | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 2.6 | 22.8 | | 7.6 | 27.8 | | | 27.0 | 7.6 | | 8.0 | |
| Effective Green, g (s) | 2.6 | 22.8 | | 7.6 | 27.8 | | | 27.0 | 7.6 | | 8.0 | |
| Actuated g/C Ratio | 0.03 | 0.28 | | 0.09 | 0.34 | | | 0.33 | 0.09 | | 0.10 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 57 | 977 | | 165 | 1203 | | | 601 | 148 | | 176 | |
| v/s Ratio Prot | 0.01 | c0.21 | | c0.05 | 0.18 | | | c0.06 | 0.01 | | c0.05 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.30 | 0.74 | | 0.54 | 0.54 | | | 0.17 | 0.06 | | 0.46 | |
| Uniform Delay, d1 | 38.5 | 26.6 | | 35.2 | 21.6 | | | 19.3 | 33.6 | | 34.7 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 2.9 | 2.9 | | 3.4 | 0.5 | | | 0.6 | 0.2 | | 1.9 | |
| Delay (s) | 41.4 | 29.5 | | 38.6 | 22.1 | | | 19.9 | 33.8 | | 36.6 | |
| Level of Service | D | C | | D | C | | | B | C | | D | |
| Approach Delay (s) | | 29.7 | | | 24.1 | | | 26.3 | | | 36.6 | |
| Approach LOS | | C | | | C | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 27.3 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.45 | | |
| Actuated Cycle Length (s) | 81.4 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 47.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 17 | 804 | 2 | 9 | 770 | 14 | 1 | 0 | 14 | 7 | 0 | 17 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 17 | 804 | 2 | 9 | 770 | 14 | 1 | 0 | 14 | 7 | 0 | 17 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 824 | | | 792 | | | | | | | |
| pX, platoon unblocked | 0.86 | | | 0.86 | | | 0.93 | 0.93 | 0.86 | 0.93 | 0.93 | 0.86 |
| vC, conflicting volume | 784 | | | 806 | | | 1259 | 1641 | 403 | 1245 | 1635 | 392 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 587 | | | 611 | | | 753 | 1164 | 142 | 738 | 1157 | 132 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 99 | | | 100 | 100 | 98 | 97 | 100 | 98 |
| cM capacity (veh/h) | 847 | | | 829 | | | 265 | 174 | 757 | 273 | 175 | 769 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 17 | 536 | 270 | 9 | 513 | 271 | 15 | 24 |
| Volume Left | 17 | 0 | 0 | 9 | 0 | 0 | 1 | 7 |
| Volume Right | 0 | 0 | 2 | 0 | 0 | 14 | 14 | 17 |
| cSH | 847 | 1700 | 1700 | 829 | 1700 | 1700 | 673 | 502 |
| Volume to Capacity | 0.02 | 0.32 | 0.16 | 0.01 | 0.30 | 0.16 | 0.02 | 0.05 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 1 | 0 | 0 | 2 | 4 |
| Control Delay (s) | 9.3 | 0.0 | 0.0 | 9.4 | 0.0 | 0.0 | 10.5 | 12.5 |
| Lane LOS | A | | | A | | | B | B |
| Approach Delay (s) | 0.2 | | | 0.1 | | | 10.5 | 12.5 |
| Approach LOS | | | | | | | B | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 32.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.86 | 1.00 | 0.97 | 0.86 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 6408 | 1583 | 3433 | 6408 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 6408 | 1583 | 3433 | 6408 | 1583 |
| Volume (vph) | 401 | 541 | 192 | 331 | 537 | 166 | 230 | 1508 | 262 | 246 | 1918 | 292 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 401 | 541 | 192 | 331 | 537 | 166 | 230 | 1508 | 262 | 246 | 1918 | 292 |
| RTOR Reduction (vph) | 0 | 0 | 139 | 0 | 0 | 123 | 0 | 0 | 125 | 0 | 0 | 109 |
| Lane Group Flow (vph) | 401 | 541 | 53 | 331 | 537 | 43 | 230 | 1508 | 137 | 246 | 1918 | 183 |
| Turn Type | Prot | | Over | Prot | | Over | Prot | | Over | Prot | | Over |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 18.0 | 20.0 | 16.8 | 18.0 | 20.0 | 17.0 | 16.8 | 119.0 | 18.0 | 17.0 | 119.2 | 18.0 |
| Effective Green, g (s) | 18.0 | 20.0 | 16.8 | 18.0 | 20.0 | 17.0 | 16.8 | 119.0 | 18.0 | 17.0 | 119.2 | 18.0 |
| Actuated g/C Ratio | 0.09 | 0.11 | 0.09 | 0.09 | 0.11 | 0.09 | 0.09 | 0.63 | 0.09 | 0.09 | 0.63 | 0.09 |
| Clearance 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 |
| 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 | 3.0 |
| Lane Grp Cap (vph) | 325 | 373 | 140 | 325 | 373 | 142 | 304 | 4013 | 150 | 307 | 4020 | 150 |
| v/s Ratio Prot | c0.12 | c0.15 | 0.03 | 0.10 | 0.15 | 0.03 | 0.07 | 0.24 | 0.09 | c0.07 | c0.30 | 0.12 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 1.23 | 1.45 | 0.38 | 1.02 | 1.44 | 0.30 | 0.76 | 0.38 | 0.91 | 0.80 | 0.48 | 1.22 |
| Uniform Delay, d1 | 86.0 | 85.0 | 81.7 | 86.0 | 85.0 | 81.0 | 84.6 | 17.3 | 85.2 | 84.8 | 18.8 | 86.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.94 | 1.17 | 1.20 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 129.1 | 217.2 | 1.7 | 54.7 | 212.6 | 1.2 | 9.5 | 0.2 | 45.9 | 13.9 | 0.4 | 145.5 |
| Delay (s) | 215.1 | 302.2 | 83.3 | 140.7 | 297.6 | 82.2 | 89.2 | 20.5 | 148.5 | 98.8 | 19.2 | 231.5 |
| Level of Service | F | F | F | F | F | F | F | C | F | F | B | F |
| Approach Delay (s) | | 234.3 | | | 212.8 | | | 45.1 | | | 52.4 | |
| Approach LOS | | F | | | F | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 106.4 | HCM Level of Service | F |
| HCM Volume to Capacity ratio | 0.68 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 75.7% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 1.00 | | 1.00 | 0.97 | 0.86 | | 1.00 | 0.86 | 1.00 |
| Frt | 1.00 | | 0.85 | 1.00 | | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 6398 | | 1770 | 6408 | 1583 |
| Flt Permitted | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 6398 | | 1770 | 6408 | 1583 |
| Volume (vph) | 350 | 0 | 555 | 8 | 0 | 20 | 383 | 1683 | 18 | 20 | 2230 | 252 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 350 | 0 | 555 | 8 | 0 | 20 | 383 | 1683 | 18 | 20 | 2230 | 252 |
| RTOR Reduction (vph) | 0 | 0 | 462 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 39 |
| Lane Group Flow (vph) | 350 | 0 | 93 | 8 | 0 | 1 | 383 | 1701 | 0 | 20 | 2230 | 213 |
| Turn Type | custom | | Over | custom | | Over | Prot | | | Prot | | Perm |
| Protected Phases | | | 5 | | | 1 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 6 |
| Actuated Green, G (s) | 22.6 | | 26.9 | 22.6 | | 6.4 | 26.9 | 149.0 | | 6.4 | 128.5 | 128.5 |
| Effective Green, g (s) | 22.6 | | 26.9 | 22.6 | | 6.4 | 26.9 | 149.0 | | 6.4 | 128.5 | 128.5 |
| Actuated g/C Ratio | 0.12 | | 0.14 | 0.12 | | 0.03 | 0.14 | 0.78 | | 0.03 | 0.68 | 0.68 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 408 | | 224 | 211 | | 53 | 486 | 5017 | | 60 | 4334 | 1071 |
| v/s Ratio Prot | | | 0.06 | | | 0.00 | c0.11 | 0.27 | | 0.01 | c0.35 | |
| v/s Ratio Perm | c0.10 | | | 0.00 | | | | | | | | 0.13 |
| v/c Ratio | 0.86 | | 0.42 | 0.04 | | 0.01 | 0.79 | 0.34 | | 0.33 | 0.51 | 0.20 |
| Uniform Delay, d1 | 82.1 | | 74.4 | 74.1 | | 88.7 | 78.8 | 6.0 | | 89.7 | 15.3 | 11.5 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 0.96 | 0.74 | 0.74 |
| Incremental Delay, d2 | 16.2 | | 1.3 | 0.1 | | 0.1 | 8.3 | 0.2 | | 2.8 | 0.4 | 0.4 |
| Delay (s) | 98.3 | | 75.6 | 74.2 | | 88.8 | 87.1 | 6.2 | | 88.9 | 11.7 | 8.8 |
| Level of Service | F | | E | E | | F | F | A | | F | B | A |
| Approach Delay (s) | | 84.4 | | | 84.6 | | | 21.1 | | | 12.0 | |
| Approach LOS | | F | | | F | | | C | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 27.7 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.60 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 80.0% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Volume (veh/h) | 36 | 12 | 150 | 22 | 10 | 244 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 36 | 12 | 150 | 22 | 10 | 244 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | 692 |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 425 | 161 | | | 172 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 425 | 161 | | | 172 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 94 | 99 | | | 99 | |
| cM capacity (veh/h) | 582 | 884 | | | 1405 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 48 | 172 | 10 | 244 |
| Volume Left | 36 | 0 | 10 | 0 |
| Volume Right | 12 | 22 | 0 | 0 |
| cSH | 636 | 1700 | 1405 | 1700 |
| Volume to Capacity | 0.08 | 0.10 | 0.01 | 0.14 |
| Queue Length 95th (ft) | 6 | 0 | 1 | 0 |
| Control Delay (s) | 11.1 | 0.0 | 7.6 | 0.0 |
| Lane LOS | B | | A | |
| Approach Delay (s) | 11.1 | 0.0 | 0.3 | |
| Approach LOS | B | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.3 | | |
| Intersection Capacity Utilization | 22.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 8 | 6 | 3 | 1 | 19 | 0 | 4 | 4 | 0 | 0 | 6 | 2 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 8 | 6 | 3 | 1 | 19 | 0 | 4 | 4 | 0 | 0 | 6 | 2 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 17 | 20 | 8 | 8 |
| Volume Left (vph) | 8 | 1 | 4 | 0 |
| Volume Right (vph) | 3 | 0 | 0 | 2 |
| Hadj (s) | 0.02 | 0.04 | 0.13 | -0.12 |
| Departure Headway (s) | 4.0 | 4.0 | 4.1 | 3.9 |
| Degree Utilization, x | 0.02 | 0.02 | 0.01 | 0.01 |
| Capacity (veh/h) | 895 | 892 | 853 | 916 |
| Control Delay (s) | 7.1 | 7.1 | 7.2 | 6.9 |
| Approach Delay (s) | 7.1 | 7.1 | 7.2 | 6.9 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.1 | | |
| HCM Level of Service | A | | |
| Intersection Capacity Utilization | 14.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 3433 | 3464 | | 3433 | 3539 | 1583 | 3433 | 5009 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 3433 | 3464 | | 3433 | 3539 | 1583 | 3433 | 5009 | |
| Volume (vph) | 115 | 516 | 282 | 225 | 494 | 82 | 238 | 589 | 171 | 110 | 760 | 84 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 115 | 516 | 282 | 225 | 494 | 82 | 238 | 589 | 171 | 110 | 760 | 84 |
| RTOR Reduction (vph) | 0 | 0 | 248 | 0 | 12 | 0 | 0 | 0 | 160 | 0 | 11 | 0 |
| Lane Group Flow (vph) | 115 | 516 | 34 | 225 | 564 | 0 | 238 | 589 | 11 | 110 | 833 | 0 |
| Turn Type | Prot | | Over | Prot | | | Prot | | Over | Prot | | |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 12.2 | 28.5 | 13.1 | 7.0 | 23.3 | | 13.1 | 49.6 | 7.0 | 8.9 | 45.4 | |
| Effective Green, g (s) | 12.2 | 28.5 | 13.1 | 7.0 | 23.3 | | 13.1 | 49.6 | 7.0 | 8.9 | 45.4 | |
| Actuated g/C Ratio | 0.11 | 0.26 | 0.12 | 0.06 | 0.21 | | 0.12 | 0.45 | 0.06 | 0.08 | 0.41 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 196 | 917 | 189 | 218 | 734 | | 409 | 1596 | 101 | 278 | 2067 | |
| v/s Ratio Prot | c0.06 | 0.15 | 0.02 | c0.07 | c0.16 | | c0.07 | 0.17 | 0.01 | 0.03 | c0.17 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.59 | 0.56 | 0.18 | 1.03 | 0.77 | | 0.58 | 0.37 | 0.11 | 0.40 | 0.40 | |
| Uniform Delay, d1 | 46.5 | 35.3 | 43.6 | 51.5 | 40.8 | | 45.9 | 19.9 | 48.6 | 48.0 | 22.8 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 4.4 | 0.8 | 0.5 | 69.6 | 4.9 | | 2.1 | 0.7 | 0.5 | 0.9 | 0.6 | |
| Delay (s) | 50.9 | 36.1 | 44.1 | 121.1 | 45.7 | | 48.0 | 20.6 | 49.0 | 48.9 | 23.3 | |
| Level of Service | D | D | D | F | D | | D | C | D | D | C | |
| Approach Delay (s) | | 40.4 | | | 66.8 | | | 32.0 | | | 26.3 | |
| Approach LOS | | D | | | E | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 40.2 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.57 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 59.3% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Volume (veh/h) | 15 | 680 | 730 | 22 | 13 | 11 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 15 | 680 | 730 | 22 | 13 | 11 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | 516 | | | |
| pX, platoon unblocked | 0.87 | | | | 0.87 | 0.87 |
| vC, conflicting volume | 752 | | | | 1100 | 365 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 566 | | | | 966 | 121 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 98 | | | | 94 | 99 |
| cM capacity (veh/h) | 872 | | | | 216 | 790 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | SB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 15 | 340 | 340 | 365 | 365 | 22 | 24 |
| Volume Left | 15 | 0 | 0 | 0 | 0 | 0 | 13 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 22 | 11 |
| cSH | 872 | 1700 | 1700 | 1700 | 1700 | 1700 | 324 |
| Volume to Capacity | 0.02 | 0.20 | 0.20 | 0.21 | 0.21 | 0.01 | 0.07 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 0 | 0 | 6 |
| Control Delay (s) | 9.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 17.0 |
| Lane LOS | A | | | | | | C |
| Approach Delay (s) | 0.2 | | | 0.0 | | | 17.0 |
| Approach LOS | | | | | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 30.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 30 | 681 | 0 | 0 | 743 | 10 | 0 | 0 | 4 | 3 | 0 | 16 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 30 | 681 | 0 | 0 | 743 | 10 | 0 | 0 | 4 | 3 | 0 | 16 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 561 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.90 | | | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | |
| vC, conflicting volume | 753 | | | 681 | | | 1128 | 1494 | 340 | 1148 | 1484 | 372 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 753 | | | 537 | | | 1033 | 1439 | 159 | 1054 | 1427 | 372 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 96 | | | 100 | | | 100 | 100 | 99 | 98 | 100 | 97 |
| cM capacity (veh/h) | 853 | | | 926 | | | 160 | 115 | 774 | 157 | 116 | 626 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 30 | 340 | 340 | 372 | 372 | 10 | 4 | 19 |
| Volume Left | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 10 | 4 | 16 |
| cSH | 853 | 1700 | 1700 | 1700 | 1700 | 1700 | 774 | 426 |
| Volume to Capacity | 0.04 | 0.20 | 0.20 | 0.22 | 0.22 | 0.01 | 0.01 | 0.04 |
| Queue Length 95th (ft) | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Control Delay (s) | 9.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 9.7 | 13.9 |
| Lane LOS | A | | | | | | A | B |
| Approach Delay (s) | 0.4 | | | 0.0 | | | 9.7 | 13.9 |
| Approach LOS | | | | | | | A | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 35.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.97 | | 1.00 | 0.95 | | 1.00 | 0.91 | | 1.00 | 0.94 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3432 | | 1770 | 3376 | | 1770 | 1700 | | 1770 | 1750 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3432 | | 1770 | 3376 | | 1770 | 1700 | | 1770 | 1750 | |
| Volume (vph) | 40 | 126 | 32 | 87 | 106 | 47 | 38 | 77 | 107 | 58 | 116 | 79 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 40 | 126 | 32 | 87 | 106 | 47 | 38 | 77 | 107 | 58 | 116 | 79 |
| RTOR Reduction (vph) | 0 | 24 | 0 | 0 | 39 | 0 | 0 | 31 | 0 | 0 | 15 | 0 |
| Lane Group Flow (vph) | 40 | 134 | 0 | 87 | 114 | 0 | 38 | 153 | 0 | 58 | 180 | 0 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 4.7 | 9.4 | | 7.8 | 12.5 | | 4.7 | 38.0 | | 5.3 | 38.6 | |
| Effective Green, g (s) | 4.7 | 9.4 | | 7.8 | 12.5 | | 4.7 | 38.0 | | 5.3 | 38.6 | |
| Actuated g/C Ratio | 0.06 | 0.12 | | 0.10 | 0.16 | | 0.06 | 0.50 | | 0.07 | 0.50 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 109 | 422 | | 180 | 552 | | 109 | 844 | | 123 | 883 | |
| v/s Ratio Prot | 0.02 | c0.04 | | c0.05 | c0.03 | | 0.02 | 0.09 | | c0.03 | c0.10 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.37 | 0.32 | | 0.48 | 0.21 | | 0.35 | 0.18 | | 0.47 | 0.20 | |
| Uniform Delay, d1 | 34.5 | 30.6 | | 32.4 | 27.7 | | 34.4 | 10.6 | | 34.3 | 10.5 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 2.1 | 0.4 | | 2.0 | 0.2 | | 1.9 | 0.5 | | 2.8 | 0.5 | |
| Delay (s) | 36.6 | 31.1 | | 34.5 | 27.9 | | 36.4 | 11.1 | | 37.1 | 11.0 | |
| Level of Service | D | C | | C | C | | D | B | | D | B | |
| Approach Delay (s) | | 32.2 | | | 30.3 | | | 15.4 | | | 17.0 | |
| Approach LOS | | C | | | C | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 23.4 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.27 | | |
| Actuated Cycle Length (s) | 76.5 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 44.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | | | 1.00 | 0.85 | | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (prot) | 1770 | 3467 | | 1770 | 3529 | | | 1807 | 1583 | | 1763 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (perm) | 1770 | 3467 | | 1770 | 3529 | | | 1807 | 1583 | | 1763 | |
| Volume (vph) | 59 | 858 | 135 | 110 | 781 | 15 | 132 | 82 | 121 | 35 | 85 | 59 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 59 | 858 | 135 | 110 | 781 | 15 | 132 | 82 | 121 | 35 | 85 | 59 |
| RTOR Reduction (vph) | 0 | 11 | 0 | 0 | 1 | 0 | 0 | 0 | 107 | 0 | 18 | 0 |
| Lane Group Flow (vph) | 59 | 982 | 0 | 110 | 795 | 0 | 0 | 214 | 14 | 0 | 161 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | Over | Split | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 7.2 | 27.0 | | 11.1 | 30.9 | | | 25.1 | 11.1 | | 14.0 | |
| Effective Green, g (s) | 7.2 | 27.0 | | 11.1 | 30.9 | | | 25.1 | 11.1 | | 14.0 | |
| Actuated g/C Ratio | 0.08 | 0.29 | | 0.12 | 0.33 | | | 0.27 | 0.12 | | 0.15 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 137 | 1004 | | 211 | 1170 | | | 487 | 189 | | 265 | |
| v/s Ratio Prot | 0.03 | c0.28 | | c0.06 | c0.23 | | | c0.12 | 0.01 | | c0.09 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.43 | 0.98 | | 0.52 | 0.68 | | | 0.44 | 0.08 | | 0.61 | |
| Uniform Delay, d1 | 41.0 | 32.8 | | 38.6 | 26.9 | | | 28.2 | 36.5 | | 37.0 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 2.2 | 23.0 | | 2.3 | 1.6 | | | 2.9 | 0.2 | | 3.9 | |
| Delay (s) | 43.2 | 55.8 | | 40.9 | 28.5 | | | 31.1 | 36.7 | | 41.0 | |
| Level of Service | D | E | | D | C | | | C | D | | D | |
| Approach Delay (s) | | 55.1 | | | 30.0 | | | 33.1 | | | 41.0 | |
| Approach LOS | | E | | | C | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 41.9 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.70 | | |
| Actuated Cycle Length (s) | 93.2 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 69.1% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 62 | 1061 | 2 | 14 | 933 | 36 | 1 | 3 | 12 | 19 | 0 | 17 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 62 | 1061 | 2 | 14 | 933 | 36 | 1 | 3 | 12 | 19 | 0 | 17 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 824 | | | 792 | | | | | | | |
| pX, platoon unblocked | 0.81 | | | 0.78 | | | 0.88 | 0.88 | 0.78 | 0.88 | 0.88 | 0.81 |
| vC, conflicting volume | 969 | | | 1063 | | | 1698 | 2183 | 532 | 1647 | 2166 | 484 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 722 | | | 796 | | | 991 | 1546 | 113 | 933 | 1526 | 121 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 91 | | | 98 | | | 99 | 97 | 98 | 89 | 100 | 98 |
| cM capacity (veh/h) | 707 | | | 639 | | | 157 | 89 | 714 | 170 | 91 | 732 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 62 | 707 | 356 | 14 | 622 | 347 | 16 | 36 |
| Volume Left | 62 | 0 | 0 | 14 | 0 | 0 | 1 | 19 |
| Volume Right | 0 | 0 | 2 | 0 | 0 | 36 | 12 | 17 |
| cSH | 707 | 1700 | 1700 | 639 | 1700 | 1700 | 281 | 267 |
| Volume to Capacity | 0.09 | 0.42 | 0.21 | 0.02 | 0.37 | 0.20 | 0.06 | 0.14 |
| Queue Length 95th (ft) | 7 | 0 | 0 | 2 | 0 | 0 | 5 | 12 |
| Control Delay (s) | 10.6 | 0.0 | 0.0 | 10.8 | 0.0 | 0.0 | 18.6 | 20.6 |
| Lane LOS | B | | | B | | | C | C |
| Approach Delay (s) | 0.6 | | | 0.2 | | | 18.6 | 20.6 |
| Approach LOS | | | | | | | C | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.9 | | |
| Intersection Capacity Utilization | 51.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 0.95 | | 0.88 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (prot) | 3539 | 1583 | 1770 | 3539 | | 2787 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (perm) | 3539 | 1583 | 1770 | 3539 | | 2787 |
| Volume (vph) | 1050 | 47 | 80 | 1025 | 0 | 368 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 1050 | 47 | 80 | 1025 | 0 | 368 |
| RTOR Reduction (vph) | 0 | 26 | 0 | 0 | 0 | 216 |
| Lane Group Flow (vph) | 1050 | 21 | 80 | 1025 | 0 | 152 |
| Turn Type | | custom | Prot | | | custom |
| Protected Phases | 4 | 2 | 3 | 8 | | 2 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 31.1 | 35.9 | 7.8 | 42.9 | | 35.9 |
| Effective Green, g (s) | 31.1 | 35.9 | 7.8 | 42.9 | | 35.9 |
| Actuated g/C Ratio | 0.36 | 0.41 | 0.09 | 0.49 | | 0.41 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 1268 | 655 | 159 | 1749 | | 1153 |
| v/s Ratio Prot | c0.30 | 0.01 | 0.05 | c0.29 | | c0.05 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.83 | 0.03 | 0.50 | 0.59 | | 0.13 |
| Uniform Delay, d1 | 25.4 | 15.1 | 37.7 | 15.6 | | 15.8 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 4.6 | 0.1 | 2.5 | 0.5 | | 0.2 |
| Delay (s) | 30.0 | 15.2 | 40.1 | 16.1 | | 16.0 |
| Level of Service | C | B | D | B | | B |
| Approach Delay (s) | 29.4 | | | 17.9 | 16.0 | |
| Approach LOS | C | | | B | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 22.5 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.48 | | |
| Actuated Cycle Length (s) | 86.8 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 48.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | 1.00 | 0.97 | 0.91 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 5085 | 1583 | 3433 | 5085 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 5085 | 1583 | 3433 | 5085 | 1583 |
| Volume (vph) | 463 | 743 | 282 | 364 | 567 | 103 | 161 | 1594 | 339 | 265 | 3175 | 233 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor (vph) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 85% | 100% | 100% | 85% | 100% |
| Adj. Flow (vph) | 463 | 743 | 282 | 364 | 567 | 103 | 161 | 1355 | 339 | 265 | 2699 | 233 |
| RTOR Reduction (vph) | 0 | 0 | 129 | 0 | 0 | 73 | 0 | 0 | 142 | 0 | 0 | 49 |
| Lane Group Flow (vph) | 463 | 743 | 153 | 364 | 567 | 30 | 161 | 1355 | 197 | 265 | 2699 | 184 |
| Turn Type | Prot | | Over | Prot | | Over | Prot | | Over | Prot | | Over |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 18.0 | 20.0 | 18.0 | 18.0 | 20.0 | 17.4 | 18.0 | 118.6 | 18.0 | 17.4 | 118.0 | 18.0 |
| Effective Green, g (s) | 18.0 | 20.0 | 18.0 | 18.0 | 20.0 | 17.4 | 18.0 | 118.6 | 18.0 | 17.4 | 118.0 | 18.0 |
| Actuated g/C Ratio | 0.09 | 0.11 | 0.09 | 0.09 | 0.11 | 0.09 | 0.09 | 0.62 | 0.09 | 0.09 | 0.62 | 0.09 |
| Clearance 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 |
| 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 | 3.0 |
| Lane Grp Cap (vph) | 325 | 373 | 150 | 325 | 373 | 145 | 325 | 3174 | 150 | 314 | 3158 | 150 |
| v/s Ratio Prot | c0.13 | c0.21 | c0.10 | 0.11 | 0.16 | 0.02 | 0.05 | 0.27 | 0.12 | 0.08 | c0.53 | 0.12 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 1.42 | 1.99 | 1.02 | 1.12 | 1.52 | 0.21 | 0.50 | 0.43 | 1.31 | 0.84 | 0.85 | 1.23 |
| Uniform Delay, d1 | 86.0 | 85.0 | 86.0 | 86.0 | 85.0 | 79.9 | 81.7 | 18.3 | 86.0 | 85.0 | 29.1 | 86.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.04 | 1.28 | 1.26 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 208.1 | 455.9 | 79.7 | 86.3 | 247.4 | 0.7 | 1.1 | 0.4 | 176.4 | 18.3 | 3.2 | 147.3 |
| Delay (s) | 294.1 | 540.9 | 165.7 | 172.3 | 332.4 | 80.6 | 86.1 | 23.7 | 284.9 | 103.3 | 32.3 | 233.3 |
| Level of Service | F | F | F | F | F | F | F | C | F | F | C | F |
| Approach Delay (s) | | 393.0 | | | 251.0 | | | 76.9 | | | 52.8 | |
| Approach LOS | | F | | | F | | | E | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 152.6 | HCM Level of Service | F |
| HCM Volume to Capacity ratio | 1.06 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 143.4% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 1.00 | | 1.00 | 0.97 | 0.91 | | 1.00 | 0.91 | 1.00 |
| Frt | 1.00 | | 0.85 | 1.00 | | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 5081 | | 1770 | 5085 | 1583 |
| Flt Permitted | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 5081 | | 1770 | 5085 | 1583 |
| Volume (vph) | 451 | 0 | 427 | 8 | 0 | 9 | 149 | 1612 | 7 | 32 | 3552 | 109 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor (vph) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 85% | 100% | 100% | 85% | 100% |
| Adj. Flow (vph) | 451 | 0 | 427 | 8 | 0 | 9 | 149 | 1370 | 7 | 32 | 3019 | 109 |
| RTOR Reduction (vph) | 0 | 0 | 395 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 9 |
| Lane Group Flow (vph) | 451 | 0 | 32 | 8 | 0 | 0 | 149 | 1377 | 0 | 32 | 3019 | 100 |
| Turn Type | custom | | Over | custom | | Over | Prot | | | Prot | | Perm |
| Protected Phases | | | 5 | | | 1 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 6 |
| Actuated Green, G (s) | 28.0 | | 14.4 | 28.0 | | 7.5 | 14.4 | 142.5 | | 7.5 | 135.6 | 135.6 |
| Effective Green, g (s) | 28.0 | | 14.4 | 28.0 | | 7.5 | 14.4 | 142.5 | | 7.5 | 135.6 | 135.6 |
| Actuated g/C Ratio | 0.15 | | 0.08 | 0.15 | | 0.04 | 0.08 | 0.75 | | 0.04 | 0.71 | 0.71 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 506 | | 120 | 261 | | 62 | 260 | 3811 | | 70 | 3629 | 1130 |
| v/s Ratio Prot | | | 0.02 | | | 0.00 | c0.04 | 0.27 | | 0.02 | c0.59 | |
| v/s Ratio Perm | c0.13 | | | 0.00 | | | | | | | | 0.06 |
| v/c Ratio | 0.89 | | 0.27 | 0.03 | | 0.01 | 0.57 | 0.36 | | 0.46 | 0.83 | 0.09 |
| Uniform Delay, d1 | 79.5 | | 82.8 | 69.4 | | 87.7 | 84.8 | 8.1 | | 89.3 | 19.2 | 8.3 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 0.86 | 0.60 | 0.90 |
| Incremental Delay, d2 | 17.7 | | 1.2 | 0.0 | | 0.0 | 3.0 | 0.3 | | 2.0 | 1.0 | 0.1 |
| Delay (s) | 97.2 | | 84.1 | 69.4 | | 87.7 | 87.9 | 8.4 | | 78.4 | 12.5 | 7.5 |
| Level of Service | F | | F | E | | F | F | A | | E | B | A |
| Approach Delay (s) | | 90.8 | | | 79.1 | | | 16.2 | | | 13.0 | |
| Approach LOS | | F | | | E | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 26.3 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.82 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 98.1% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Volume (veh/h) | 87 | 46 | 257 | 11 | 1 | 437 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 87 | 46 | 257 | 11 | 1 | 437 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | 692 |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 702 | 262 | | | 268 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 702 | 262 | | | 268 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 78 | 94 | | | 100 | |
| cM capacity (veh/h) | 404 | 776 | | | 1296 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 133 | 268 | 1 | 437 |
| Volume Left | 87 | 0 | 1 | 0 |
| Volume Right | 46 | 11 | 0 | 0 |
| cSH | 485 | 1700 | 1296 | 1700 |
| Volume to Capacity | 0.27 | 0.16 | 0.00 | 0.26 |
| Queue Length 95th (ft) | 28 | 0 | 0 | 0 |
| Control Delay (s) | 15.2 | 0.0 | 7.8 | 0.0 |
| Lane LOS | C | | A | |
| Approach Delay (s) | 15.2 | 0.0 | 0.0 | |
| Approach LOS | C | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.4 | | |
| Intersection Capacity Utilization | 37.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 9 | 3 | 0 | 0 | 73 | 7 | 7 | 11 | 0 | 0 | 1 | 5 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 9 | 3 | 0 | 0 | 73 | 7 | 7 | 11 | 0 | 0 | 1 | 5 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 12 | 80 | 18 | 6 |
| Volume Left (vph) | 9 | 0 | 7 | 0 |
| Volume Right (vph) | 0 | 7 | 0 | 5 |
| Hadj (s) | 0.18 | -0.02 | 0.11 | -0.47 |
| Departure Headway (s) | 4.2 | 3.9 | 4.2 | 3.6 |
| Degree Utilization, x | 0.01 | 0.09 | 0.02 | 0.01 |
| Capacity (veh/h) | 841 | 902 | 826 | 957 |
| Control Delay (s) | 7.3 | 7.3 | 7.3 | 6.7 |
| Approach Delay (s) | 7.3 | 7.3 | 7.3 | 6.7 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.3 | | |
| HCM Level of Service | A | | |
| Intersection Capacity Utilization | 20.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 3433 | 3472 | | 3433 | 3539 | 1583 | 3433 | 5019 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 3433 | 3472 | | 3433 | 3539 | 1583 | 3433 | 5019 | |
| Volume (vph) | 152 | 719 | 314 | 348 | 729 | 105 | 309 | 610 | 181 | 170 | 1078 | 102 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 152 | 719 | 314 | 348 | 729 | 105 | 309 | 610 | 181 | 170 | 1078 | 102 |
| RTOR Reduction (vph) | 0 | 0 | 271 | 0 | 9 | 0 | 0 | 0 | 169 | 0 | 10 | 0 |
| Lane Group Flow (vph) | 152 | 719 | 43 | 348 | 825 | 0 | 309 | 610 | 12 | 170 | 1170 | 0 |
| Turn Type | Prot | | Over | Prot | | | Prot | | Over | Prot | | |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 14.4 | 32.0 | 15.1 | 7.0 | 24.6 | | 15.1 | 44.6 | 7.0 | 10.4 | 39.9 | |
| Effective Green, g (s) | 14.4 | 32.0 | 15.1 | 7.0 | 24.6 | | 15.1 | 44.6 | 7.0 | 10.4 | 39.9 | |
| Actuated g/C Ratio | 0.13 | 0.29 | 0.14 | 0.06 | 0.22 | | 0.14 | 0.41 | 0.06 | 0.09 | 0.36 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 232 | 1030 | 217 | 218 | 776 | | 471 | 1435 | 101 | 325 | 1821 | |
| v/s Ratio Prot | c0.09 | 0.20 | 0.03 | c0.10 | c0.24 | | c0.09 | 0.17 | 0.01 | 0.05 | c0.23 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.66 | 0.70 | 0.20 | 1.60 | 1.06 | | 0.66 | 0.43 | 0.11 | 0.52 | 0.64 | |
| Uniform Delay, d1 | 45.4 | 34.7 | 42.1 | 51.5 | 42.7 | | 45.0 | 23.5 | 48.6 | 47.4 | 29.1 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 6.5 | 2.1 | 0.5 | 288.9 | 50.3 | | 3.3 | 0.9 | 0.5 | 1.5 | 1.8 | |
| Delay (s) | 51.9 | 36.8 | 42.5 | 340.4 | 93.0 | | 48.3 | 24.4 | 49.1 | 49.0 | 30.9 | |
| Level of Service | D | D | D | F | F | | D | C | D | D | C | |
| Approach Delay (s) | | 40.3 | | | 165.8 | | | 35.2 | | | 33.2 | |
| Approach LOS | | D | | | F | | | D | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 67.9 | HCM Level of Service | E |
| HCM Volume to Capacity ratio | 0.82 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 77.2% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Volume (veh/h) | 50 | 1043 | 903 | 22 | 6 | 19 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 50 | 1043 | 903 | 22 | 6 | 19 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | 516 | | | |
| pX, platoon unblocked | 0.82 | | | | 0.82 | 0.82 |
| vC, conflicting volume | 925 | | | | 1524 | 452 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 690 | | | | 1420 | 113 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 93 | | | | 94 | 97 |
| cM capacity (veh/h) | 739 | | | | 97 | 754 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | SB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 50 | 522 | 522 | 452 | 452 | 22 | 25 |
| Volume Left | 50 | 0 | 0 | 0 | 0 | 0 | 6 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 22 | 19 |
| cSH | 739 | 1700 | 1700 | 1700 | 1700 | 1700 | 288 |
| Volume to Capacity | 0.07 | 0.31 | 0.31 | 0.27 | 0.27 | 0.01 | 0.09 |
| Queue Length 95th (ft) | 5 | 0 | 0 | 0 | 0 | 0 | 7 |
| Control Delay (s) | 10.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 18.7 |
| Lane LOS | B | | | | | | C |
| Approach Delay (s) | 0.5 | | | 0.0 | | | 18.7 |
| Approach LOS | | | | | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.5 | | |
| Intersection Capacity Utilization | 41.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 42 | 1033 | 0 | 0 | 955 | 14 | 0 | 0 | 34 | 3 | 0 | 34 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 42 | 1033 | 0 | 0 | 955 | 14 | 0 | 0 | 34 | 3 | 0 | 34 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 561 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.83 | | | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | |
| vC, conflicting volume | 969 | | | 1033 | | | 1628 | 2086 | 516 | 1590 | 2072 | 478 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 969 | | | 831 | | | 1551 | 2104 | 206 | 1504 | 2087 | 478 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 94 | | | 100 | | | 100 | 100 | 95 | 95 | 100 | 94 |
| cM capacity (veh/h) | 707 | | | 659 | | | 57 | 40 | 662 | 63 | 41 | 534 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 42 | 516 | 516 | 478 | 478 | 14 | 34 | 37 |
| Volume Left | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 14 | 34 | 34 |
| cSH | 707 | 1700 | 1700 | 1700 | 1700 | 1700 | 662 | 332 |
| Volume to Capacity | 0.06 | 0.30 | 0.30 | 0.28 | 0.28 | 0.01 | 0.05 | 0.11 |
| Queue Length 95th (ft) | 5 | 0 | 0 | 0 | 0 | 0 | 4 | 9 |
| Control Delay (s) | 10.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.7 | 17.2 |
| Lane LOS | B | | | | | | B | C |
| Approach Delay (s) | 0.4 | | | 0.0 | | | 10.7 | 17.2 |
| Approach LOS | | | | | | | B | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.7 | | |
| Intersection Capacity Utilization | 45.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.97 | | 1.00 | 0.96 | | 1.00 | 0.92 | | 1.00 | 0.95 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3419 | | 1770 | 3383 | | 1770 | 1707 | | 1770 | 1778 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3419 | | 1770 | 3383 | | 1770 | 1707 | | 1770 | 1778 | |
| Volume (vph) | 33 | 249 | 73 | 84 | 110 | 46 | 69 | 146 | 183 | 151 | 298 | 129 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 33 | 249 | 73 | 84 | 110 | 46 | 69 | 146 | 183 | 151 | 298 | 129 |
| RTOR Reduction (vph) | 0 | 26 | 0 | 0 | 37 | 0 | 0 | 32 | 0 | 0 | 12 | 0 |
| Lane Group Flow (vph) | 33 | 296 | 0 | 84 | 119 | 0 | 69 | 297 | 0 | 151 | 415 | 0 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 4.5 | 14.2 | | 8.0 | 17.7 | | 7.4 | 41.5 | | 10.8 | 44.9 | |
| Effective Green, g (s) | 4.5 | 14.2 | | 8.0 | 17.7 | | 7.4 | 41.5 | | 10.8 | 44.9 | |
| Actuated g/C Ratio | 0.05 | 0.16 | | 0.09 | 0.20 | | 0.08 | 0.46 | | 0.12 | 0.50 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 88 | 536 | | 156 | 662 | | 145 | 783 | | 211 | 882 | |
| v/s Ratio Prot | 0.02 | c0.09 | | c0.05 | c0.04 | | 0.04 | 0.17 | | c0.09 | c0.23 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.38 | 0.55 | | 0.54 | 0.18 | | 0.48 | 0.38 | | 0.72 | 0.47 | |
| Uniform Delay, d1 | 41.6 | 35.2 | | 39.5 | 30.3 | | 39.7 | 16.1 | | 38.4 | 15.0 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 2.7 | 1.2 | | 3.5 | 0.1 | | 2.5 | 1.4 | | 11.0 | 1.8 | |
| Delay (s) | 44.3 | 36.4 | | 43.0 | 30.5 | | 42.2 | 17.4 | | 49.3 | 16.8 | |
| Level of Service | D | D | | D | C | | D | B | | D | B | |
| Approach Delay (s) | | 37.2 | | | 34.9 | | | 21.7 | | | 25.3 | |
| Approach LOS | | D | | | C | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 28.5 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.55 | | |
| Actuated Cycle Length (s) | 90.5 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 57.8% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | | | 1.00 | 0.85 | | 0.95 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (prot) | 1770 | 3483 | | 1770 | 3531 | | | 1814 | 1583 | | 1748 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (perm) | 1770 | 3483 | | 1770 | 3531 | | | 1814 | 1583 | | 1748 | |
| Volume (vph) | 27 | 737 | 88 | 125 | 674 | 10 | 88 | 75 | 106 | 27 | 48 | 46 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 27 | 737 | 88 | 125 | 674 | 10 | 88 | 75 | 106 | 27 | 48 | 46 |
| RTOR Reduction (vph) | 0 | 8 | 0 | 0 | 1 | 0 | 0 | 0 | 95 | 0 | 23 | 0 |
| Lane Group Flow (vph) | 27 | 817 | 0 | 125 | 683 | 0 | 0 | 163 | 11 | 0 | 98 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | Over | Split | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 2.9 | 26.6 | | 9.3 | 33.0 | | | 26.5 | 9.3 | | 8.7 | |
| Effective Green, g (s) | 2.9 | 26.6 | | 9.3 | 33.0 | | | 26.5 | 9.3 | | 8.7 | |
| Actuated g/C Ratio | 0.03 | 0.31 | | 0.11 | 0.38 | | | 0.30 | 0.11 | | 0.10 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 59 | 1064 | | 189 | 1338 | | | 552 | 169 | | 175 | |
| v/s Ratio Prot | 0.02 | c0.23 | | c0.07 | 0.19 | | | c0.09 | 0.01 | | c0.06 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.46 | 0.77 | | 0.66 | 0.51 | | | 0.30 | 0.07 | | 0.56 | |
| Uniform Delay, d1 | 41.3 | 27.5 | | 37.4 | 20.8 | | | 23.2 | 35.0 | | 37.4 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 5.5 | 3.4 | | 8.4 | 0.3 | | | 1.4 | 0.2 | | 3.8 | |
| Delay (s) | 46.9 | 30.8 | | 45.8 | 21.2 | | | 24.5 | 35.2 | | 41.2 | |
| Level of Service | D | C | | D | C | | | C | D | | D | |
| Approach Delay (s) | | 31.3 | | | 25.0 | | | 28.7 | | | 41.2 | |
| Approach LOS | | C | | | C | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 29.1 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.55 | | |
| Actuated Cycle Length (s) | 87.1 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 55.6% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 35 | 875 | 6 | 35 | 812 | 30 | 1 | 0 | 5 | 21 | 1 | 25 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 35 | 875 | 6 | 35 | 812 | 30 | 1 | 0 | 5 | 21 | 1 | 25 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 824 | | | 792 | | | | | | | |
| pX, platoon unblocked | 0.86 | | | 0.83 | | | 0.90 | 0.90 | 0.83 | 0.90 | 0.90 | 0.86 |
| vC, conflicting volume | 842 | | | 881 | | | 1450 | 1860 | 440 | 1410 | 1848 | 421 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 655 | | | 655 | | | 926 | 1381 | 126 | 882 | 1368 | 165 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 96 | | | 95 | | | 99 | 100 | 99 | 90 | 99 | 97 |
| cM capacity (veh/h) | 799 | | | 772 | | | 181 | 118 | 750 | 201 | 120 | 732 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 35 | 583 | 298 | 35 | 541 | 301 | 6 | 47 |
| Volume Left | 35 | 0 | 0 | 35 | 0 | 0 | 1 | 21 |
| Volume Right | 0 | 0 | 6 | 0 | 0 | 30 | 5 | 25 |
| cSH | 799 | 1700 | 1700 | 772 | 1700 | 1700 | 492 | 320 |
| Volume to Capacity | 0.04 | 0.34 | 0.18 | 0.05 | 0.32 | 0.18 | 0.01 | 0.15 |
| Queue Length 95th (ft) | 3 | 0 | 0 | 4 | 0 | 0 | 1 | 13 |
| Control Delay (s) | 9.7 | 0.0 | 0.0 | 9.9 | 0.0 | 0.0 | 12.4 | 18.2 |
| Lane LOS | A | | | A | | | B | C |
| Approach Delay (s) | 0.4 | | | 0.4 | | | 12.4 | 18.2 |
| Approach LOS | | | | | | | B | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.9 | | |
| Intersection Capacity Utilization | 41.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 0.94 | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | 0.97 | 1.00 |
| Satd. Flow (prot) | 3539 | 1583 | 1770 | 3539 | 1694 | 1504 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | 0.97 | 1.00 |
| Satd. Flow (perm) | 3539 | 1583 | 1770 | 3539 | 1694 | 1504 |
| Volume (vph) | 745 | 184 | 190 | 873 | 34 | 79 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 745 | 184 | 190 | 873 | 34 | 79 |
| RTOR Reduction (vph) | 0 | 107 | 0 | 0 | 15 | 31 |
| Lane Group Flow (vph) | 745 | 77 | 190 | 873 | 45 | 22 |
| Turn Type | | Over | Prot | | | Prot |
| Protected Phases | 4 | 2 | 3 | 8 | 2 | 2 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 23.7 | 35.6 | 14.2 | 41.9 | 35.6 | 35.6 |
| Effective Green, g (s) | 23.7 | 35.6 | 14.2 | 41.9 | 35.6 | 35.6 |
| Actuated g/C Ratio | 0.28 | 0.42 | 0.17 | 0.49 | 0.42 | 0.42 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 981 | 659 | 294 | 1734 | 705 | 626 |
| v/s Ratio Prot | c0.21 | c0.05 | c0.11 | 0.25 | 0.03 | 0.01 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.76 | 0.12 | 0.65 | 0.50 | 0.06 | 0.04 |
| Uniform Delay, d1 | 28.3 | 15.3 | 33.3 | 14.8 | 15.0 | 14.8 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 3.4 | 0.4 | 4.8 | 0.2 | 0.2 | 0.1 |
| Delay (s) | 31.7 | 15.7 | 38.1 | 15.0 | 15.1 | 14.9 |
| Level of Service | C | B | D | B | B | B |
| Approach Delay (s) | 28.5 | | | 19.1 | 15.0 | |
| Approach LOS | C | | | B | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 23.1 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.43 | | |
| Actuated Cycle Length (s) | 85.5 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 49.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | 1.00 | 0.97 | 0.91 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 5085 | 1583 | 3433 | 5085 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 5085 | 1583 | 3433 | 5085 | 1583 |
| Volume (vph) | 311 | 364 | 113 | 322 | 602 | 227 | 171 | 2982 | 199 | 122 | 1425 | 200 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor (vph) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 85% | 100% | 100% | 85% | 100% |
| Adj. Flow (vph) | 311 | 364 | 113 | 322 | 602 | 227 | 171 | 2535 | 199 | 122 | 1211 | 200 |
| RTOR Reduction (vph) | 0 | 0 | 105 | 0 | 0 | 154 | 0 | 0 | 45 | 0 | 0 | 94 |
| Lane Group Flow (vph) | 311 | 364 | 8 | 322 | 602 | 73 | 171 | 2535 | 154 | 122 | 1211 | 106 |
| Turn Type | Prot | | Over | Prot | | Over | Prot | | Over | Prot | | Over |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 17.0 | 24.6 | 13.2 | 20.4 | 28.0 | 14.2 | 13.2 | 114.8 | 20.4 | 14.2 | 115.8 | 17.0 |
| Effective Green, g (s) | 17.0 | 24.6 | 13.2 | 20.4 | 28.0 | 14.2 | 13.2 | 114.8 | 20.4 | 14.2 | 115.8 | 17.0 |
| Actuated g/C Ratio | 0.09 | 0.13 | 0.07 | 0.11 | 0.15 | 0.07 | 0.07 | 0.60 | 0.11 | 0.07 | 0.61 | 0.09 |
| Clearance 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 |
| 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 | 3.0 |
| Lane Grp Cap (vph) | 307 | 458 | 110 | 369 | 522 | 118 | 239 | 3072 | 170 | 257 | 3099 | 142 |
| v/s Ratio Prot | c0.09 | 0.10 | 0.00 | 0.09 | c0.17 | 0.05 | c0.05 | c0.50 | 0.10 | 0.04 | 0.24 | 0.07 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 1.01 | 0.79 | 0.07 | 0.87 | 1.15 | 0.62 | 0.72 | 0.83 | 0.91 | 0.47 | 0.39 | 0.75 |
| Uniform Delay, d1 | 86.5 | 80.3 | 82.7 | 83.5 | 81.0 | 85.3 | 86.6 | 29.7 | 83.9 | 84.3 | 19.0 | 84.4 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.94 | 1.24 | 1.12 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 54.7 | 9.2 | 0.3 | 19.7 | 89.1 | 9.8 | 8.1 | 2.2 | 37.7 | 1.4 | 0.4 | 19.2 |
| Delay (s) | 141.2 | 89.5 | 82.9 | 103.2 | 170.1 | 95.1 | 89.6 | 39.2 | 131.7 | 85.7 | 19.4 | 103.6 |
| Level of Service | F | F | F | F | F | F | F | D | F | F | B | F |
| Approach Delay (s) | | 109.0 | | | 136.6 | | | 48.5 | | | 35.7 | |
| Approach LOS | | F | | | F | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 68.8 | HCM Level of Service | E |
| HCM Volume to Capacity ratio | 0.88 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 96.2% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 1.00 | | 1.00 | 0.97 | 0.91 | | 1.00 | 0.91 | 1.00 |
| Frt | 1.00 | | 0.85 | 1.00 | | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 5083 | | 1770 | 5085 | 1583 |
| Flt Permitted | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 5083 | | 1770 | 5085 | 1583 |
| Volume (vph) | 132 | 0 | 111 | 12 | 0 | 12 | 445 | 3103 | 8 | 10 | 1569 | 364 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor (vph) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 85% | 100% | 100% | 85% | 100% |
| Adj. Flow (vph) | 132 | 0 | 111 | 12 | 0 | 12 | 445 | 2638 | 8 | 10 | 1334 | 364 |
| RTOR Reduction (vph) | 0 | 0 | 94 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 63 |
| Lane Group Flow (vph) | 132 | 0 | 17 | 12 | 0 | 0 | 445 | 2646 | 0 | 10 | 1334 | 301 |
| Turn Type | custom | | Over | custom | | Over | Prot | | | Prot | | Perm |
| Protected Phases | | | 5 | | | 1 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 6 |
| Actuated Green, G (s) | 12.0 | | 28.6 | 12.0 | | 4.3 | 28.6 | 161.7 | | 4.3 | 137.4 | 137.4 |
| Effective Green, g (s) | 12.0 | | 28.6 | 12.0 | | 4.3 | 28.6 | 161.7 | | 4.3 | 137.4 | 137.4 |
| Actuated g/C Ratio | 0.06 | | 0.15 | 0.06 | | 0.02 | 0.15 | 0.85 | | 0.02 | 0.72 | 0.72 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 217 | | 238 | 112 | | 36 | 517 | 4326 | | 40 | 3677 | 1145 |
| v/s Ratio Prot | | | 0.01 | | | 0.00 | c0.13 | c0.52 | | 0.01 | 0.26 | |
| v/s Ratio Perm | c0.04 | | | 0.01 | | | | | | | | 0.19 |
| v/c Ratio | 0.61 | | 0.07 | 0.11 | | 0.01 | 0.86 | 0.61 | | 0.25 | 0.36 | 0.26 |
| Uniform Delay, d1 | 86.7 | | 69.3 | 83.9 | | 90.8 | 78.8 | 4.4 | | 91.3 | 9.9 | 9.0 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 0.94 | 0.77 | 0.49 |
| Incremental Delay, d2 | 4.8 | | 0.1 | 0.4 | | 0.1 | 13.7 | 0.7 | | 2.9 | 0.2 | 0.5 |
| Delay (s) | 91.5 | | 69.4 | 84.4 | | 90.8 | 92.5 | 5.0 | | 89.1 | 7.8 | 4.9 |
| Level of Service | F | | E | F | | F | F | A | | F | A | A |
| Approach Delay (s) | | 81.4 | | | 87.6 | | | 17.6 | | | 7.7 | |
| Approach LOS | | F | | | F | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 17.7 | HCM Level of Service | B |
| HCM Volume to Capacity ratio | 0.65 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 75.3% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Volume (veh/h) | 4 | 3 | 392 | 102 | 17 | 206 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 4 | 3 | 392 | 102 | 17 | 206 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | 692 |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 683 | 443 | | | 494 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 683 | 443 | | | 494 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 99 | 100 | | | 98 | |
| cM capacity (veh/h) | 408 | 615 | | | 1070 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 7 | 494 | 17 | 206 |
| Volume Left | 4 | 0 | 17 | 0 |
| Volume Right | 3 | 102 | 0 | 0 |
| cSH | 477 | 1700 | 1070 | 1700 |
| Volume to Capacity | 0.01 | 0.29 | 0.02 | 0.12 |
| Queue Length 95th (ft) | 1 | 0 | 1 | 0 |
| Control Delay (s) | 12.7 | 0.0 | 8.4 | 0.0 |
| Lane LOS | B | | A | |
| Approach Delay (s) | 12.7 | 0.0 | 0.6 | |
| Approach LOS | B | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.3 | | |
| Intersection Capacity Utilization | 36.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 2 | 45 | 16 | 1 | 12 | 2 | 0 | 0 | 0 | 6 | 16 | 9 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 2 | 45 | 16 | 1 | 12 | 2 | 0 | 0 | 0 | 6 | 16 | 9 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 63 | 15 | 0 | 31 |
| Volume Left (vph) | 2 | 1 | 0 | 6 |
| Volume Right (vph) | 16 | 2 | 0 | 9 |
| Hadj (s) | -0.11 | -0.03 | 0.00 | -0.10 |
| Departure Headway (s) | 3.9 | 4.0 | 4.1 | 4.0 |
| Degree Utilization, x | 0.07 | 0.02 | 0.00 | 0.03 |
| Capacity (veh/h) | 916 | 888 | 871 | 888 |
| Control Delay (s) | 7.1 | 7.1 | 7.1 | 7.1 |
| Approach Delay (s) | 7.1 | 7.1 | 0.0 | 7.1 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.1 | | |
| HCM Level of Service | A | | |
| Intersection Capacity Utilization | 13.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 3433 | 3471 | | 3433 | 3539 | 1583 | 3433 | 4996 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 3433 | 3471 | | 3433 | 3539 | 1583 | 3433 | 4996 | |
| Volume (vph) | 137 | 557 | 266 | 233 | 560 | 82 | 276 | 921 | 345 | 140 | 769 | 102 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 137 | 557 | 266 | 233 | 560 | 82 | 276 | 921 | 345 | 140 | 769 | 102 |
| RTOR Reduction (vph) | 0 | 0 | 232 | 0 | 10 | 0 | 0 | 0 | 256 | 0 | 14 | 0 |
| Lane Group Flow (vph) | 137 | 557 | 34 | 233 | 632 | 0 | 276 | 921 | 89 | 140 | 857 | 0 |
| Turn Type | Prot | | Over | Prot | | | Prot | | Over | Prot | | |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 13.6 | 32.0 | 14.1 | 7.0 | 25.4 | | 14.1 | 45.3 | 7.0 | 9.7 | 40.9 | |
| Effective Green, g (s) | 13.6 | 32.0 | 14.1 | 7.0 | 25.4 | | 14.1 | 45.3 | 7.0 | 9.7 | 40.9 | |
| Actuated g/C Ratio | 0.12 | 0.29 | 0.13 | 0.06 | 0.23 | | 0.13 | 0.41 | 0.06 | 0.09 | 0.37 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 219 | 1030 | 203 | 218 | 801 | | 440 | 1457 | 101 | 303 | 1858 | |
| v/s Ratio Prot | c0.08 | 0.16 | 0.02 | c0.07 | c0.18 | | c0.08 | c0.26 | 0.06 | 0.04 | 0.17 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.63 | 0.54 | 0.17 | 1.07 | 0.79 | | 0.63 | 0.63 | 0.88 | 0.46 | 0.46 | |
| Uniform Delay, d1 | 45.8 | 32.8 | 42.7 | 51.5 | 39.8 | | 45.5 | 25.7 | 51.1 | 47.7 | 26.2 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 5.5 | 0.6 | 0.4 | 80.4 | 5.2 | | 2.8 | 2.1 | 54.1 | 1.1 | 0.8 | |
| Delay (s) | 51.3 | 33.4 | 43.1 | 131.9 | 45.0 | | 48.2 | 27.8 | 105.2 | 48.8 | 27.0 | |
| Level of Service | D | C | D | F | D | | D | C | F | D | C | |
| Approach Delay (s) | | 38.6 | | | 68.1 | | | 48.8 | | | 30.0 | |
| Approach LOS | | D | | | E | | | D | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 46.1 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.68 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 70.3% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Volume (veh/h) | 13 | 917 | 795 | 21 | 8 | 22 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 13 | 917 | 795 | 21 | 8 | 22 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | 516 | | | |
| pX, platoon unblocked | 0.86 | | | | 0.86 | 0.86 |
| vC, conflicting volume | 816 | | | | 1280 | 398 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 628 | | | | 1165 | 144 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 98 | | | | 95 | 97 |
| cM capacity (veh/h) | 820 | | | | 159 | 758 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | SB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 13 | 458 | 458 | 398 | 398 | 21 | 30 |
| Volume Left | 13 | 0 | 0 | 0 | 0 | 0 | 8 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 21 | 22 |
| cSH | 820 | 1700 | 1700 | 1700 | 1700 | 1700 | 378 |
| Volume to Capacity | 0.02 | 0.27 | 0.27 | 0.23 | 0.23 | 0.01 | 0.08 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 0 | 0 | 6 |
| Control Delay (s) | 9.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15.3 |
| Lane LOS | A | | | | | | C |
| Approach Delay (s) | 0.1 | | | 0.0 | | | 15.3 |
| Approach LOS | | | | | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.3 | | |
| Intersection Capacity Utilization | 35.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 20 | 997 | 0 | 0 | 811 | 10 | 0 | 0 | 4 | 13 | 0 | 38 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 20 | 997 | 0 | 0 | 811 | 10 | 0 | 0 | 4 | 13 | 0 | 38 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 561 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.88 | | | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | |
| vC, conflicting volume | 821 | | | 997 | | | 1480 | 1858 | 498 | 1354 | 1848 | 406 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 821 | | | 860 | | | 1410 | 1839 | 293 | 1265 | 1827 | 406 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 100 | | | 100 | 100 | 99 | 88 | 100 | 94 |
| cM capacity (veh/h) | 804 | | | 684 | | | 80 | 64 | 618 | 108 | 65 | 595 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 20 | 498 | 498 | 406 | 406 | 10 | 4 | 51 |
| Volume Left | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 10 | 4 | 38 |
| cSH | 804 | 1700 | 1700 | 1700 | 1700 | 1700 | 618 | 277 |
| Volume to Capacity | 0.02 | 0.29 | 0.29 | 0.24 | 0.24 | 0.01 | 0.01 | 0.18 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| Control Delay (s) | 9.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.9 | 20.9 |
| Lane LOS | A | | | | | | B | C |
| Approach Delay (s) | 0.2 | | | 0.0 | | | 10.9 | 20.9 |
| Approach LOS | | | | | | | B | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.7 | | |
| Intersection Capacity Utilization | 44.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.94 | | 1.00 | 0.94 | | 1.00 | 0.97 | | 1.00 | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3319 | | 1770 | 3309 | | 1770 | 1816 | | 1770 | 1786 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3319 | | 1770 | 3309 | | 1770 | 1816 | | 1770 | 1786 | |
| Volume (vph) | 147 | 97 | 69 | 115 | 233 | 178 | 60 | 209 | 42 | 33 | 105 | 40 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 147 | 97 | 69 | 115 | 233 | 178 | 60 | 209 | 42 | 33 | 105 | 40 |
| RTOR Reduction (vph) | 0 | 57 | 0 | 0 | 137 | 0 | 0 | 5 | 0 | 0 | 10 | 0 |
| Lane Group Flow (vph) | 147 | 109 | 0 | 115 | 274 | 0 | 60 | 246 | 0 | 33 | 135 | 0 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 9.5 | 13.6 | | 8.4 | 12.5 | | 5.0 | 35.5 | | 2.9 | 33.4 | |
| Effective Green, g (s) | 9.5 | 13.6 | | 8.4 | 12.5 | | 5.0 | 35.5 | | 2.9 | 33.4 | |
| Actuated g/C Ratio | 0.12 | 0.18 | | 0.11 | 0.16 | | 0.07 | 0.46 | | 0.04 | 0.44 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 220 | 591 | | 195 | 541 | | 116 | 844 | | 67 | 781 | |
| v/s Ratio Prot | c0.08 | 0.03 | | 0.06 | c0.08 | | c0.03 | c0.14 | | 0.02 | 0.08 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.67 | 0.18 | | 0.59 | 0.51 | | 0.52 | 0.29 | | 0.49 | 0.17 | |
| Uniform Delay, d1 | 31.9 | 26.7 | | 32.4 | 29.1 | | 34.5 | 12.7 | | 36.0 | 13.1 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 7.5 | 0.2 | | 4.5 | 0.7 | | 3.9 | 0.9 | | 5.6 | 0.5 | |
| Delay (s) | 39.4 | 26.8 | | 36.9 | 29.9 | | 38.4 | 13.5 | | 41.6 | 13.6 | |
| Level of Service | D | C | | D | C | | D | B | | D | B | |
| Approach Delay (s) | | 32.7 | | | 31.4 | | | 18.3 | | | 18.8 | |
| Approach LOS | | C | | | C | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 27.0 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.39 | | |
| Actuated Cycle Length (s) | 76.4 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 53.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | | | 1.00 | 0.85 | | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.98 | |
| Satd. Flow (prot) | 1770 | 3479 | | 1770 | 3525 | | | 1805 | 1583 | | 1754 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.98 | |
| Satd. Flow (perm) | 1770 | 3479 | | 1770 | 3525 | | | 1805 | 1583 | | 1754 | |
| Volume (vph) | 17 | 533 | 68 | 68 | 558 | 15 | 74 | 41 | 106 | 28 | 33 | 29 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 17 | 533 | 68 | 68 | 558 | 15 | 74 | 41 | 106 | 28 | 33 | 29 |
| RTOR Reduction (vph) | 0 | 9 | 0 | 0 | 1 | 0 | 0 | 0 | 97 | 0 | 18 | 0 |
| Lane Group Flow (vph) | 17 | 592 | 0 | 68 | 572 | 0 | 0 | 115 | 9 | 0 | 72 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | Over | Split | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 1.3 | 20.4 | | 6.7 | 25.8 | | | 26.8 | 6.7 | | 7.8 | |
| Effective Green, g (s) | 1.3 | 20.4 | | 6.7 | 25.8 | | | 26.8 | 6.7 | | 7.8 | |
| Actuated g/C Ratio | 0.02 | 0.26 | | 0.09 | 0.33 | | | 0.34 | 0.09 | | 0.10 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 30 | 913 | | 153 | 1170 | | | 623 | 137 | | 176 | |
| v/s Ratio Prot | 0.01 | c0.17 | | c0.04 | 0.16 | | | c0.06 | 0.01 | | c0.04 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.57 | 0.65 | | 0.44 | 0.49 | | | 0.18 | 0.07 | | 0.41 | |
| Uniform Delay, d1 | 37.9 | 25.5 | | 33.7 | 20.7 | | | 17.8 | 32.6 | | 32.8 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 22.3 | 1.6 | | 2.1 | 0.3 | | | 0.7 | 0.2 | | 1.5 | |
| Delay (s) | 60.2 | 27.1 | | 35.8 | 21.0 | | | 18.5 | 32.8 | | 34.3 | |
| Level of Service | E | C | | D | C | | | B | C | | C | |
| Approach Delay (s) | | 28.0 | | | 22.6 | | | 25.4 | | | 34.3 | |
| Approach LOS | | C | | | C | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 25.8 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.39 | | |
| Actuated Cycle Length (s) | 77.7 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 44.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 22 | 654 | 2 | 20 | 662 | 32 | 2 | 4 | 38 | 15 | 0 | 15 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 22 | 654 | 2 | 20 | 662 | 32 | 2 | 4 | 38 | 15 | 0 | 15 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 824 | | | 792 | | | | | | | |
| pX, platoon unblocked | 0.92 | | | 0.92 | | | 0.96 | 0.96 | 0.92 | 0.96 | 0.96 | 0.92 |
| vC, conflicting volume | 694 | | | 656 | | | 1085 | 1433 | 328 | 1129 | 1418 | 347 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 587 | | | 535 | | | 804 | 1168 | 178 | 850 | 1152 | 211 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 98 | | | 99 | 98 | 95 | 93 | 100 | 98 |
| cM capacity (veh/h) | 910 | | | 944 | | | 248 | 175 | 766 | 219 | 179 | 734 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 22 | 436 | 220 | 20 | 441 | 253 | 44 | 30 |
| Volume Left | 22 | 0 | 0 | 20 | 0 | 0 | 2 | 15 |
| Volume Right | 0 | 0 | 2 | 0 | 0 | 32 | 38 | 15 |
| cSH | 910 | 1700 | 1700 | 944 | 1700 | 1700 | 547 | 337 |
| Volume to Capacity | 0.02 | 0.26 | 0.13 | 0.02 | 0.26 | 0.15 | 0.08 | 0.09 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 2 | 0 | 0 | 7 | 7 |
| Control Delay (s) | 9.1 | 0.0 | 0.0 | 8.9 | 0.0 | 0.0 | 12.2 | 16.7 |
| Lane LOS | A | | | A | | | B | C |
| Approach Delay (s) | 0.3 | | | 0.2 | | | 12.2 | 16.7 |
| Approach LOS | | | | | | | B | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.0 | | |
| Intersection Capacity Utilization | 34.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 0.94 | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | 0.97 | 1.00 |
| Satd. Flow (prot) | 3539 | 1583 | 1770 | 3539 | 1700 | 1504 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | 0.97 | 1.00 |
| Satd. Flow (perm) | 3539 | 1583 | 1770 | 3539 | 1700 | 1504 |
| Volume (vph) | 641 | 86 | 128 | 608 | 92 | 214 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 641 | 86 | 128 | 608 | 92 | 214 |
| RTOR Reduction (vph) | 0 | 45 | 0 | 0 | 17 | 81 |
| Lane Group Flow (vph) | 641 | 41 | 128 | 608 | 136 | 72 |
| Turn Type | | Over | Prot | | | Prot |
| Protected Phases | 4 | 2 | 3 | 8 | 2 | 2 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 19.1 | 36.1 | 9.1 | 32.2 | 36.1 | 36.1 |
| Effective Green, g (s) | 19.1 | 36.1 | 9.1 | 32.2 | 36.1 | 36.1 |
| Actuated g/C Ratio | 0.25 | 0.47 | 0.12 | 0.42 | 0.47 | 0.47 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 886 | 749 | 211 | 1494 | 804 | 712 |
| v/s Ratio Prot | c0.18 | 0.03 | c0.07 | 0.17 | c0.08 | 0.05 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.72 | 0.05 | 0.61 | 0.41 | 0.17 | 0.10 |
| Uniform Delay, d1 | 26.2 | 10.9 | 31.9 | 15.4 | 11.5 | 11.1 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 2.9 | 0.1 | 4.9 | 0.2 | 0.5 | 0.3 |
| Delay (s) | 29.1 | 11.0 | 36.8 | 15.6 | 12.0 | 11.4 |
| Level of Service | C | B | D | B | B | B |
| Approach Delay (s) | 27.0 | | | 19.3 | 11.7 | |
| Approach LOS | C | | | B | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 21.1 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.40 | | |
| Actuated Cycle Length (s) | 76.3 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 44.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.86 | 1.00 | 0.97 | 0.86 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 6408 | 1583 | 3433 | 6408 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 6408 | 1583 | 3433 | 6408 | 1583 |
| Volume (vph) | 302 | 409 | 132 | 326 | 443 | 156 | 187 | 1414 | 274 | 175 | 1536 | 132 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 302 | 409 | 132 | 326 | 443 | 156 | 187 | 1414 | 274 | 175 | 1536 | 132 |
| RTOR Reduction (vph) | 0 | 0 | 121 | 0 | 0 | 142 | 0 | 0 | 139 | 0 | 0 | 62 |
| Lane Group Flow (vph) | 302 | 409 | 11 | 326 | 443 | 14 | 187 | 1414 | 135 | 175 | 1536 | 70 |
| Turn Type | Prot | | Over | Prot | | Over | Prot | | Over | Prot | | Over |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 18.0 | 20.0 | 15.3 | 18.0 | 20.0 | 14.7 | 15.3 | 121.3 | 18.0 | 14.7 | 120.7 | 18.0 |
| Effective Green, g (s) | 18.0 | 20.0 | 15.3 | 18.0 | 20.0 | 14.7 | 15.3 | 121.3 | 18.0 | 14.7 | 120.7 | 18.0 |
| Actuated g/C Ratio | 0.09 | 0.11 | 0.08 | 0.09 | 0.11 | 0.08 | 0.08 | 0.64 | 0.09 | 0.08 | 0.64 | 0.09 |
| Clearance 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 |
| 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 | 3.0 |
| Lane Grp Cap (vph) | 325 | 373 | 127 | 325 | 373 | 122 | 276 | 4091 | 150 | 266 | 4071 | 150 |
| v/s Ratio Prot | 0.09 | 0.12 | 0.01 | c0.09 | c0.13 | 0.01 | c0.05 | 0.22 | 0.09 | 0.05 | c0.24 | 0.04 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.93 | 1.10 | 0.08 | 1.00 | 1.19 | 0.11 | 0.68 | 0.35 | 0.90 | 0.66 | 0.38 | 0.47 |
| Uniform Delay, d1 | 85.4 | 85.0 | 80.9 | 86.0 | 85.0 | 81.6 | 85.0 | 15.9 | 85.1 | 85.2 | 16.6 | 81.5 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.89 | 1.26 | 1.24 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 31.8 | 75.1 | 0.3 | 50.7 | 108.3 | 0.4 | 6.1 | 0.2 | 43.9 | 5.8 | 0.3 | 2.3 |
| Delay (s) | 117.1 | 160.1 | 81.1 | 136.7 | 193.3 | 82.0 | 81.7 | 20.3 | 149.4 | 91.0 | 16.9 | 83.8 |
| Level of Service | F | F | F | F | F | F | F | C | F | F | B | F |
| Approach Delay (s) | | 132.4 | | | 154.6 | | | 45.3 | | | 28.7 | |
| Approach LOS | | F | | | F | | | D | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 71.5 | HCM Level of Service | E |
| HCM Volume to Capacity ratio | 0.56 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 64.8% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 1.00 | | 1.00 | 0.97 | 0.86 | | 1.00 | 0.86 | 1.00 |
| Frt | 1.00 | | 0.85 | 1.00 | | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 6403 | | 1770 | 6408 | 1583 |
| Flt Permitted | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 6403 | | 1770 | 6408 | 1583 |
| Volume (vph) | 326 | 0 | 374 | 14 | 0 | 6 | 271 | 1540 | 8 | 9 | 1906 | 206 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 326 | 0 | 374 | 14 | 0 | 6 | 271 | 1540 | 8 | 9 | 1906 | 206 |
| RTOR Reduction (vph) | 0 | 0 | 335 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 32 |
| Lane Group Flow (vph) | 326 | 0 | 39 | 14 | 0 | 0 | 271 | 1548 | 0 | 9 | 1906 | 174 |
| Turn Type | custom | | Over | custom | | Over | Prot | | | Prot | | Perm |
| Protected Phases | | | 5 | | | 1 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 6 |
| Actuated Green, G (s) | 21.4 | | 19.7 | 21.4 | | 3.0 | 19.7 | 153.6 | | 3.0 | 136.9 | 136.9 |
| Effective Green, g (s) | 21.4 | | 19.7 | 21.4 | | 3.0 | 19.7 | 153.6 | | 3.0 | 136.9 | 136.9 |
| Actuated g/C Ratio | 0.11 | | 0.10 | 0.11 | | 0.02 | 0.10 | 0.81 | | 0.02 | 0.72 | 0.72 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 387 | | 164 | 199 | | 25 | 356 | 5176 | | 28 | 4617 | 1141 |
| v/s Ratio Prot | | | 0.02 | | | 0.00 | c0.08 | 0.24 | | 0.01 | c0.30 | |
| v/s Ratio Perm | c0.09 | | | 0.01 | | | | | | | | 0.11 |
| v/c Ratio | 0.84 | | 0.24 | 0.07 | | 0.00 | 0.76 | 0.30 | | 0.32 | 0.41 | 0.15 |
| Uniform Delay, d1 | 82.6 | | 78.2 | 75.4 | | 92.0 | 82.9 | 4.6 | | 92.5 | 10.6 | 8.3 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.02 | 0.87 | 0.83 |
| Incremental Delay, d2 | 15.2 | | 0.7 | 0.2 | | 0.1 | 9.3 | 0.1 | | 5.9 | 0.2 | 0.3 |
| Delay (s) | 97.9 | | 79.0 | 75.6 | | 92.1 | 92.1 | 4.7 | | 100.5 | 9.4 | 7.2 |
| Level of Service | F | | E | E | | F | F | A | | F | A | A |
| Approach Delay (s) | | 87.8 | | | 80.5 | | | 17.8 | | | 9.6 | |
| Approach LOS | | F | | | F | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 24.8 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.50 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 64.1% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Volume (veh/h) | 31 | 21 | 206 | 15 | 4 | 190 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 31 | 21 | 206 | 15 | 4 | 190 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | 692 |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 412 | 214 | | | 221 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 412 | 214 | | | 221 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 95 | 97 | | | 100 | |
| cM capacity (veh/h) | 595 | 827 | | | 1348 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 52 | 221 | 4 | 190 |
| Volume Left | 31 | 0 | 4 | 0 |
| Volume Right | 21 | 15 | 0 | 0 |
| cSH | 671 | 1700 | 1348 | 1700 |
| Volume to Capacity | 0.08 | 0.13 | 0.00 | 0.11 |
| Queue Length 95th (ft) | 6 | 0 | 0 | 0 |
| Control Delay (s) | 10.8 | 0.0 | 7.7 | 0.0 |
| Lane LOS | B | | A | |
| Approach Delay (s) | 10.8 | 0.0 | 0.2 | |
| Approach LOS | B | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.3 | | |
| Intersection Capacity Utilization | 21.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 13 | 13 | 9 | 0 | 13 | 6 | 7 | 17 | 0 | 1 | 21 | 8 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 13 | 13 | 9 | 0 | 13 | 6 | 7 | 17 | 0 | 1 | 21 | 8 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 35 | 19 | 24 | 30 |
| Volume Left (vph) | 13 | 0 | 7 | 1 |
| Volume Right (vph) | 9 | 6 | 0 | 8 |
| Hadj (s) | -0.05 | -0.16 | 0.09 | -0.12 |
| Departure Headway (s) | 4.0 | 3.9 | 4.1 | 3.9 |
| Degree Utilization, x | 0.04 | 0.02 | 0.03 | 0.03 |
| Capacity (veh/h) | 884 | 906 | 847 | 901 |
| Control Delay (s) | 7.1 | 7.0 | 7.3 | 7.0 |
| Approach Delay (s) | 7.1 | 7.0 | 7.3 | 7.0 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.1 | | |
| HCM Level of Service | A | | |
| Intersection Capacity Utilization | 19.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.97 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 3433 | 3426 | | 3433 | 3539 | 1583 | 3433 | 5011 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 3433 | 3426 | | 3433 | 3539 | 1583 | 3433 | 5011 | |
| Volume (vph) | 118 | 409 | 163 | 251 | 416 | 113 | 188 | 539 | 150 | 84 | 677 | 73 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 118 | 409 | 163 | 251 | 416 | 113 | 188 | 539 | 150 | 84 | 677 | 73 |
| RTOR Reduction (vph) | 0 | 0 | 147 | 0 | 22 | 0 | 0 | 0 | 140 | 0 | 10 | 0 |
| Lane Group Flow (vph) | 118 | 409 | 16 | 251 | 507 | 0 | 188 | 539 | 10 | 84 | 740 | 0 |
| Turn Type | Prot | | Over | Prot | | | Prot | | Over | Prot | | |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 12.4 | 26.5 | 11.1 | 7.0 | 21.1 | | 11.1 | 53.7 | 7.0 | 6.8 | 49.4 | |
| Effective Green, g (s) | 12.4 | 26.5 | 11.1 | 7.0 | 21.1 | | 11.1 | 53.7 | 7.0 | 6.8 | 49.4 | |
| Actuated g/C Ratio | 0.11 | 0.24 | 0.10 | 0.06 | 0.19 | | 0.10 | 0.49 | 0.06 | 0.06 | 0.45 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 200 | 853 | 160 | 218 | 657 | | 346 | 1728 | 101 | 212 | 2250 | |
| v/s Ratio Prot | c0.07 | 0.12 | 0.01 | c0.07 | c0.15 | | c0.05 | 0.15 | 0.01 | 0.02 | c0.15 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.59 | 0.48 | 0.10 | 1.15 | 0.77 | | 0.54 | 0.31 | 0.09 | 0.40 | 0.33 | |
| Uniform Delay, d1 | 46.4 | 35.8 | 44.9 | 51.5 | 42.2 | | 47.0 | 17.0 | 48.5 | 49.6 | 19.6 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 4.6 | 0.4 | 0.3 | 107.8 | 5.6 | | 1.7 | 0.5 | 0.4 | 1.2 | 0.4 | |
| Delay (s) | 51.0 | 36.3 | 45.2 | 159.3 | 47.8 | | 48.8 | 17.5 | 48.9 | 50.8 | 20.0 | |
| Level of Service | D | D | D | F | D | | D | B | D | D | B | |
| Approach Delay (s) | | 40.9 | | | 83.7 | | | 29.6 | | | 23.1 | |
| Approach LOS | | D | | | F | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 43.6 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.52 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 55.7% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Volume (veh/h) | 22 | 597 | 700 | 9 | 8 | 13 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 22 | 597 | 700 | 9 | 8 | 13 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | 516 | | | |
| pX, platoon unblocked | 0.89 | | | | 0.89 | 0.89 |
| vC, conflicting volume | 709 | | | | 1042 | 350 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 549 | | | | 924 | 146 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 98 | | | | 97 | 98 |
| cM capacity (veh/h) | 905 | | | | 233 | 778 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | SB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 22 | 298 | 298 | 350 | 350 | 9 | 21 |
| Volume Left | 22 | 0 | 0 | 0 | 0 | 0 | 8 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 9 | 13 |
| cSH | 905 | 1700 | 1700 | 1700 | 1700 | 1700 | 412 |
| Volume to Capacity | 0.02 | 0.18 | 0.18 | 0.21 | 0.21 | 0.01 | 0.05 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| Control Delay (s) | 9.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 14.2 |
| Lane LOS | A | | | | | | B |
| Approach Delay (s) | 0.3 | | | 0.0 | | | 14.2 |
| Approach LOS | | | | | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 29.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 21 | 631 | 0 | 0 | 730 | 10 | 0 | 0 | 12 | 1 | 0 | 14 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 21 | 631 | 0 | 0 | 730 | 10 | 0 | 0 | 12 | 1 | 0 | 14 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 561 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.92 | | | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | |
| vC, conflicting volume | 740 | | | 631 | | | 1052 | 1413 | 316 | 1100 | 1403 | 365 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 740 | | | 506 | | | 966 | 1359 | 162 | 1017 | 1349 | 365 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 100 | | | 100 | 100 | 98 | 99 | 100 | 98 |
| cM capacity (veh/h) | 862 | | | 967 | | | 184 | 132 | 783 | 170 | 134 | 632 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 21 | 316 | 316 | 365 | 365 | 10 | 12 | 15 |
| Volume Left | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 10 | 12 | 14 |
| cSH | 862 | 1700 | 1700 | 1700 | 1700 | 1700 | 783 | 535 |
| Volume to Capacity | 0.02 | 0.19 | 0.19 | 0.21 | 0.21 | 0.01 | 0.02 | 0.03 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| Control Delay (s) | 9.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 9.7 | 11.9 |
| Lane LOS | A | | | | | | A | B |
| Approach Delay (s) | 0.3 | | | 0.0 | | | 9.7 | 11.9 |
| Approach LOS | | | | | | | A | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.3 | | |
| Intersection Capacity Utilization | 34.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.95 | | 1.00 | 0.96 | | 1.00 | 0.95 | | 1.00 | 0.97 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3353 | | 1770 | 3392 | | 1770 | 1763 | | 1770 | 1804 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3353 | | 1770 | 3392 | | 1770 | 1763 | | 1770 | 1804 | |
| Volume (vph) | 53 | 109 | 59 | 43 | 89 | 34 | 73 | 131 | 73 | 72 | 158 | 42 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 53 | 109 | 59 | 43 | 89 | 34 | 73 | 131 | 73 | 72 | 158 | 42 |
| RTOR Reduction (vph) | 0 | 52 | 0 | 0 | 30 | 0 | 0 | 12 | 0 | 0 | 6 | 0 |
| Lane Group Flow (vph) | 53 | 116 | 0 | 43 | 93 | 0 | 73 | 192 | 0 | 72 | 194 | 0 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 5.0 | 8.9 | | 4.7 | 8.6 | | 5.6 | 39.4 | | 5.6 | 39.4 | |
| Effective Green, g (s) | 5.0 | 8.9 | | 4.7 | 8.6 | | 5.6 | 39.4 | | 5.6 | 39.4 | |
| Actuated g/C Ratio | 0.07 | 0.12 | | 0.06 | 0.12 | | 0.08 | 0.53 | | 0.08 | 0.53 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 119 | 400 | | 112 | 391 | | 133 | 931 | | 133 | 953 | |
| v/s Ratio Prot | c0.03 | c0.03 | | 0.02 | 0.03 | | c0.04 | c0.11 | | 0.04 | 0.11 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.45 | 0.29 | | 0.38 | 0.24 | | 0.55 | 0.21 | | 0.54 | 0.20 | |
| Uniform Delay, d1 | 33.5 | 30.0 | | 33.6 | 30.0 | | 33.3 | 9.3 | | 33.3 | 9.3 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 2.6 | 0.4 | | 2.2 | 0.3 | | 4.6 | 0.5 | | 4.4 | 0.5 | |
| Delay (s) | 36.1 | 30.4 | | 35.7 | 30.3 | | 37.9 | 9.8 | | 37.7 | 9.8 | |
| Level of Service | D | C | | D | C | | D | A | | D | A | |
| Approach Delay (s) | | 31.7 | | | 31.7 | | | 17.2 | | | 17.2 | |
| Approach LOS | | C | | | C | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 23.2 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.26 | | |
| Actuated Cycle Length (s) | 74.6 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 44.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | 1.00 | 0.99 | | 1.00 | 1.00 | | | 1.00 | 0.85 | | 0.97 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (prot) | 1770 | 3489 | | 1770 | 3523 | | | 1813 | 1583 | | 1790 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (perm) | 1770 | 3489 | | 1770 | 3523 | | | 1813 | 1583 | | 1790 | |
| Volume (vph) | 17 | 657 | 68 | 89 | 627 | 20 | 58 | 47 | 90 | 25 | 48 | 17 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 17 | 657 | 68 | 89 | 627 | 20 | 58 | 47 | 90 | 25 | 48 | 17 |
| RTOR Reduction (vph) | 0 | 6 | 0 | 0 | 2 | 0 | 0 | 0 | 82 | 0 | 9 | 0 |
| Lane Group Flow (vph) | 17 | 719 | 0 | 89 | 645 | 0 | 0 | 105 | 8 | 0 | 81 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | Over | Split | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 2.6 | 22.8 | | 7.6 | 27.8 | | | 27.0 | 7.6 | | 8.0 | |
| Effective Green, g (s) | 2.6 | 22.8 | | 7.6 | 27.8 | | | 27.0 | 7.6 | | 8.0 | |
| Actuated g/C Ratio | 0.03 | 0.28 | | 0.09 | 0.34 | | | 0.33 | 0.09 | | 0.10 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 57 | 977 | | 165 | 1203 | | | 601 | 148 | | 176 | |
| v/s Ratio Prot | 0.01 | c0.21 | | c0.05 | 0.18 | | | c0.06 | 0.01 | | c0.05 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.30 | 0.74 | | 0.54 | 0.54 | | | 0.17 | 0.06 | | 0.46 | |
| Uniform Delay, d1 | 38.5 | 26.6 | | 35.2 | 21.6 | | | 19.3 | 33.6 | | 34.7 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 2.9 | 2.9 | | 3.4 | 0.5 | | | 0.6 | 0.2 | | 1.9 | |
| Delay (s) | 41.4 | 29.5 | | 38.6 | 22.1 | | | 19.9 | 33.8 | | 36.6 | |
| Level of Service | D | C | | D | C | | | B | C | | D | |
| Approach Delay (s) | | 29.7 | | | 24.1 | | | 26.3 | | | 36.6 | |
| Approach LOS | | C | | | C | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 27.3 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.45 | | |
| Actuated Cycle Length (s) | 81.4 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 47.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 17 | 804 | 2 | 9 | 770 | 14 | 1 | 0 | 14 | 7 | 0 | 17 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 17 | 804 | 2 | 9 | 770 | 14 | 1 | 0 | 14 | 7 | 0 | 17 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 824 | | | 792 | | | | | | | |
| pX, platoon unblocked | 0.88 | | | 0.86 | | | 0.92 | 0.92 | 0.86 | 0.92 | 0.92 | 0.88 |
| vC, conflicting volume | 784 | | | 806 | | | 1259 | 1641 | 403 | 1245 | 1635 | 392 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 618 | | | 611 | | | 801 | 1217 | 142 | 786 | 1210 | 172 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 99 | | | 100 | 100 | 98 | 97 | 100 | 98 |
| cM capacity (veh/h) | 843 | | | 829 | | | 242 | 160 | 757 | 249 | 161 | 740 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 17 | 536 | 270 | 9 | 513 | 271 | 15 | 24 |
| Volume Left | 17 | 0 | 0 | 9 | 0 | 0 | 1 | 7 |
| Volume Right | 0 | 0 | 2 | 0 | 0 | 14 | 14 | 17 |
| cSH | 843 | 1700 | 1700 | 829 | 1700 | 1700 | 662 | 470 |
| Volume to Capacity | 0.02 | 0.32 | 0.16 | 0.01 | 0.30 | 0.16 | 0.02 | 0.05 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 1 | 0 | 0 | 2 | 4 |
| Control Delay (s) | 9.4 | 0.0 | 0.0 | 9.4 | 0.0 | 0.0 | 10.6 | 13.1 |
| Lane LOS | A | | | A | | | B | B |
| Approach Delay (s) | 0.2 | | | 0.1 | | | 10.6 | 13.1 |
| Approach LOS | | | | | | | B | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 32.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 0.90 | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | 0.98 | 1.00 |
| Satd. Flow (prot) | 3539 | 1583 | 1770 | 3539 | 1646 | 1504 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | 0.98 | 1.00 |
| Satd. Flow (perm) | 3539 | 1583 | 1770 | 3539 | 1646 | 1504 |
| Volume (vph) | 772 | 91 | 132 | 787 | 61 | 315 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 772 | 91 | 132 | 787 | 61 | 315 |
| RTOR Reduction (vph) | 0 | 50 | 0 | 0 | 57 | 101 |
| Lane Group Flow (vph) | 772 | 41 | 132 | 787 | 135 | 83 |
| Turn Type | | Over | Prot | | | Prot |
| Protected Phases | 4 | 2 | 3 | 8 | 2 | 2 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 23.1 | 36.3 | 9.4 | 36.5 | 36.3 | 36.3 |
| Effective Green, g (s) | 23.1 | 36.3 | 9.4 | 36.5 | 36.3 | 36.3 |
| Actuated g/C Ratio | 0.29 | 0.45 | 0.12 | 0.45 | 0.45 | 0.45 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 1012 | 711 | 206 | 1599 | 739 | 676 |
| v/s Ratio Prot | c0.22 | 0.03 | c0.07 | 0.22 | c0.08 | 0.05 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.76 | 0.06 | 0.64 | 0.49 | 0.18 | 0.12 |
| Uniform Delay, d1 | 26.3 | 12.6 | 34.1 | 15.6 | 13.4 | 13.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 3.5 | 0.2 | 6.6 | 0.2 | 0.5 | 0.4 |
| Delay (s) | 29.8 | 12.7 | 40.7 | 15.9 | 13.9 | 13.3 |
| Level of Service | C | B | D | B | B | B |
| Approach Delay (s) | 28.0 | | | 19.4 | 13.6 | |
| Approach LOS | C | | | B | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 21.8 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.44 | | |
| Actuated Cycle Length (s) | 80.8 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 48.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.86 | 1.00 | 0.97 | 0.86 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 6408 | 1583 | 3433 | 6408 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 6408 | 1583 | 3433 | 6408 | 1583 |
| Volume (vph) | 382 | 541 | 192 | 331 | 537 | 166 | 230 | 1508 | 262 | 246 | 1918 | 292 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 382 | 541 | 192 | 331 | 537 | 166 | 230 | 1508 | 262 | 246 | 1918 | 292 |
| RTOR Reduction (vph) | 0 | 0 | 139 | 0 | 0 | 123 | 0 | 0 | 125 | 0 | 0 | 109 |
| Lane Group Flow (vph) | 382 | 541 | 53 | 331 | 537 | 43 | 230 | 1508 | 137 | 246 | 1918 | 183 |
| Turn Type | Prot | | Over | Prot | | Over | Prot | | Over | Prot | | Over |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 18.0 | 20.0 | 16.8 | 18.0 | 20.0 | 17.0 | 16.8 | 119.0 | 18.0 | 17.0 | 119.2 | 18.0 |
| Effective Green, g (s) | 18.0 | 20.0 | 16.8 | 18.0 | 20.0 | 17.0 | 16.8 | 119.0 | 18.0 | 17.0 | 119.2 | 18.0 |
| Actuated g/C Ratio | 0.09 | 0.11 | 0.09 | 0.09 | 0.11 | 0.09 | 0.09 | 0.63 | 0.09 | 0.09 | 0.63 | 0.09 |
| Clearance 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 |
| 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 | 3.0 |
| Lane Grp Cap (vph) | 325 | 373 | 140 | 325 | 373 | 142 | 304 | 4013 | 150 | 307 | 4020 | 150 |
| v/s Ratio Prot | 0.11 | c0.15 | 0.03 | 0.10 | 0.15 | 0.03 | 0.07 | 0.24 | 0.09 | c0.07 | c0.30 | c0.12 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 1.18 | 1.45 | 0.38 | 1.02 | 1.44 | 0.30 | 0.76 | 0.38 | 0.91 | 0.80 | 0.48 | 1.22 |
| Uniform Delay, d1 | 86.0 | 85.0 | 81.7 | 86.0 | 85.0 | 81.0 | 84.6 | 17.3 | 85.2 | 84.8 | 18.8 | 86.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.94 | 1.17 | 1.20 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 106.4 | 217.2 | 1.7 | 54.7 | 212.6 | 1.2 | 9.5 | 0.2 | 45.9 | 13.9 | 0.4 | 145.5 |
| Delay (s) | 192.4 | 302.2 | 83.3 | 140.7 | 297.6 | 82.2 | 89.2 | 20.5 | 148.5 | 98.8 | 19.2 | 231.5 |
| Level of Service | F | F | F | F | F | F | F | C | F | F | B | F |
| Approach Delay (s) | | 226.9 | | | 212.8 | | | 45.1 | | | 52.4 | |
| Approach LOS | | F | | | F | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 104.8 | HCM Level of Service | F |
| HCM Volume to Capacity ratio | 0.68 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 75.2% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 1.00 | | 1.00 | 0.97 | 0.86 | | 1.00 | 0.86 | 1.00 |
| Frt | 1.00 | | 0.85 | 1.00 | | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 6398 | | 1770 | 6408 | 1583 |
| Flt Permitted | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 6398 | | 1770 | 6408 | 1583 |
| Volume (vph) | 350 | 0 | 555 | 8 | 0 | 20 | 383 | 1683 | 18 | 20 | 2230 | 252 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 350 | 0 | 555 | 8 | 0 | 20 | 383 | 1683 | 18 | 20 | 2230 | 252 |
| RTOR Reduction (vph) | 0 | 0 | 462 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 39 |
| Lane Group Flow (vph) | 350 | 0 | 93 | 8 | 0 | 1 | 383 | 1701 | 0 | 20 | 2230 | 213 |
| Turn Type | custom | | Over | custom | | Over | Prot | | | Prot | | Perm |
| Protected Phases | | | 5 | | | 1 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 6 |
| Actuated Green, G (s) | 22.6 | | 26.9 | 22.6 | | 6.4 | 26.9 | 149.0 | | 6.4 | 128.5 | 128.5 |
| Effective Green, g (s) | 22.6 | | 26.9 | 22.6 | | 6.4 | 26.9 | 149.0 | | 6.4 | 128.5 | 128.5 |
| Actuated g/C Ratio | 0.12 | | 0.14 | 0.12 | | 0.03 | 0.14 | 0.78 | | 0.03 | 0.68 | 0.68 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 408 | | 224 | 211 | | 53 | 486 | 5017 | | 60 | 4334 | 1071 |
| v/s Ratio Prot | | | 0.06 | | | 0.00 | c0.11 | 0.27 | | 0.01 | c0.35 | |
| v/s Ratio Perm | c0.10 | | | 0.00 | | | | | | | | 0.13 |
| v/c Ratio | 0.86 | | 0.42 | 0.04 | | 0.01 | 0.79 | 0.34 | | 0.33 | 0.51 | 0.20 |
| Uniform Delay, d1 | 82.1 | | 74.4 | 74.1 | | 88.7 | 78.8 | 6.0 | | 89.7 | 15.3 | 11.5 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 0.96 | 0.74 | 0.74 |
| Incremental Delay, d2 | 16.2 | | 1.3 | 0.1 | | 0.1 | 8.3 | 0.2 | | 2.8 | 0.4 | 0.4 |
| Delay (s) | 98.3 | | 75.6 | 74.2 | | 88.8 | 87.1 | 6.2 | | 88.9 | 11.7 | 8.8 |
| Level of Service | F | | E | E | | F | F | A | | F | B | A |
| Approach Delay (s) | | 84.4 | | | 84.6 | | | 21.1 | | | 12.0 | |
| Approach LOS | | F | | | F | | | C | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 27.7 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.60 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 80.0% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Volume (veh/h) | 36 | 12 | 150 | 22 | 10 | 244 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 36 | 12 | 150 | 22 | 10 | 244 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | 692 |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 425 | 161 | | | 172 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 425 | 161 | | | 172 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 94 | 99 | | | 99 | |
| cM capacity (veh/h) | 582 | 884 | | | 1405 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 48 | 172 | 10 | 244 |
| Volume Left | 36 | 0 | 10 | 0 |
| Volume Right | 12 | 22 | 0 | 0 |
| cSH | 636 | 1700 | 1405 | 1700 |
| Volume to Capacity | 0.08 | 0.10 | 0.01 | 0.14 |
| Queue Length 95th (ft) | 6 | 0 | 1 | 0 |
| Control Delay (s) | 11.1 | 0.0 | 7.6 | 0.0 |
| Lane LOS | B | | A | |
| Approach Delay (s) | 11.1 | 0.0 | 0.3 | |
| Approach LOS | B | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.3 | | |
| Intersection Capacity Utilization | 22.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 8 | 6 | 3 | 1 | 19 | 0 | 4 | 4 | 0 | 0 | 6 | 2 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 8 | 6 | 3 | 1 | 19 | 0 | 4 | 4 | 0 | 0 | 6 | 2 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 17 | 20 | 8 | 8 |
| Volume Left (vph) | 8 | 1 | 4 | 0 |
| Volume Right (vph) | 3 | 0 | 0 | 2 |
| Hadj (s) | 0.02 | 0.04 | 0.13 | -0.12 |
| Departure Headway (s) | 4.0 | 4.0 | 4.1 | 3.9 |
| Degree Utilization, x | 0.02 | 0.02 | 0.01 | 0.01 |
| Capacity (veh/h) | 895 | 892 | 853 | 916 |
| Control Delay (s) | 7.1 | 7.1 | 7.2 | 6.9 |
| Approach Delay (s) | 7.1 | 7.1 | 7.2 | 6.9 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.1 | | |
| HCM Level of Service | A | | |
| Intersection Capacity Utilization | 14.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 3433 | 3464 | | 3433 | 3539 | 1583 | 3433 | 5009 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 3433 | 3464 | | 3433 | 3539 | 1583 | 3433 | 5009 | |
| Volume (vph) | 115 | 516 | 282 | 225 | 494 | 82 | 238 | 589 | 171 | 110 | 760 | 84 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 115 | 516 | 282 | 225 | 494 | 82 | 238 | 589 | 171 | 110 | 760 | 84 |
| RTOR Reduction (vph) | 0 | 0 | 248 | 0 | 12 | 0 | 0 | 0 | 160 | 0 | 11 | 0 |
| Lane Group Flow (vph) | 115 | 516 | 34 | 225 | 564 | 0 | 238 | 589 | 11 | 110 | 833 | 0 |
| Turn Type | Prot | | Over | Prot | | | Prot | | Over | Prot | | |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 12.2 | 28.5 | 13.1 | 7.0 | 23.3 | | 13.1 | 49.6 | 7.0 | 8.9 | 45.4 | |
| Effective Green, g (s) | 12.2 | 28.5 | 13.1 | 7.0 | 23.3 | | 13.1 | 49.6 | 7.0 | 8.9 | 45.4 | |
| Actuated g/C Ratio | 0.11 | 0.26 | 0.12 | 0.06 | 0.21 | | 0.12 | 0.45 | 0.06 | 0.08 | 0.41 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 196 | 917 | 189 | 218 | 734 | | 409 | 1596 | 101 | 278 | 2067 | |
| v/s Ratio Prot | c0.06 | 0.15 | 0.02 | c0.07 | c0.16 | | c0.07 | 0.17 | 0.01 | 0.03 | c0.17 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.59 | 0.56 | 0.18 | 1.03 | 0.77 | | 0.58 | 0.37 | 0.11 | 0.40 | 0.40 | |
| Uniform Delay, d1 | 46.5 | 35.3 | 43.6 | 51.5 | 40.8 | | 45.9 | 19.9 | 48.6 | 48.0 | 22.8 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 4.4 | 0.8 | 0.5 | 69.6 | 4.9 | | 2.1 | 0.7 | 0.5 | 0.9 | 0.6 | |
| Delay (s) | 50.9 | 36.1 | 44.1 | 121.1 | 45.7 | | 48.0 | 20.6 | 49.0 | 48.9 | 23.3 | |
| Level of Service | D | D | D | F | D | | D | C | D | D | C | |
| Approach Delay (s) | | 40.4 | | | 66.8 | | | 32.0 | | | 26.3 | |
| Approach LOS | | D | | | E | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 40.2 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.57 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 59.3% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Volume (veh/h) | 15 | 680 | 730 | 22 | 13 | 11 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 15 | 680 | 730 | 22 | 13 | 11 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | 516 | | | |
| pX, platoon unblocked | 0.87 | | | | 0.87 | 0.87 |
| vC, conflicting volume | 752 | | | | 1100 | 365 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 566 | | | | 966 | 121 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 98 | | | | 94 | 99 |
| cM capacity (veh/h) | 872 | | | | 216 | 790 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | SB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 15 | 340 | 340 | 365 | 365 | 22 | 24 |
| Volume Left | 15 | 0 | 0 | 0 | 0 | 0 | 13 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 22 | 11 |
| cSH | 872 | 1700 | 1700 | 1700 | 1700 | 1700 | 324 |
| Volume to Capacity | 0.02 | 0.20 | 0.20 | 0.21 | 0.21 | 0.01 | 0.07 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 0 | 0 | 6 |
| Control Delay (s) | 9.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 17.0 |
| Lane LOS | A | | | | | | C |
| Approach Delay (s) | 0.2 | | | 0.0 | | | 17.0 |
| Approach LOS | | | | | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 30.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 30 | 681 | 0 | 0 | 743 | 10 | 0 | 0 | 4 | 3 | 0 | 16 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 30 | 681 | 0 | 0 | 743 | 10 | 0 | 0 | 4 | 3 | 0 | 16 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 561 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.90 | | | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | |
| vC, conflicting volume | 753 | | | 681 | | | 1128 | 1494 | 340 | 1148 | 1484 | 372 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 753 | | | 537 | | | 1033 | 1439 | 159 | 1054 | 1427 | 372 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 96 | | | 100 | | | 100 | 100 | 99 | 98 | 100 | 97 |
| cM capacity (veh/h) | 853 | | | 926 | | | 160 | 115 | 774 | 157 | 116 | 626 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 30 | 340 | 340 | 372 | 372 | 10 | 4 | 19 |
| Volume Left | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 10 | 4 | 16 |
| cSH | 853 | 1700 | 1700 | 1700 | 1700 | 1700 | 774 | 426 |
| Volume to Capacity | 0.04 | 0.20 | 0.20 | 0.22 | 0.22 | 0.01 | 0.01 | 0.04 |
| Queue Length 95th (ft) | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Control Delay (s) | 9.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 9.7 | 13.9 |
| Lane LOS | A | | | | | | A | B |
| Approach Delay (s) | 0.4 | | | 0.0 | | | 9.7 | 13.9 |
| Approach LOS | | | | | | | A | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 35.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.97 | | 1.00 | 0.95 | | 1.00 | 0.91 | | 1.00 | 0.94 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3432 | | 1770 | 3376 | | 1770 | 1700 | | 1770 | 1750 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3432 | | 1770 | 3376 | | 1770 | 1700 | | 1770 | 1750 | |
| Volume (vph) | 40 | 126 | 32 | 87 | 106 | 47 | 38 | 77 | 107 | 58 | 116 | 79 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 40 | 126 | 32 | 87 | 106 | 47 | 38 | 77 | 107 | 58 | 116 | 79 |
| RTOR Reduction (vph) | 0 | 24 | 0 | 0 | 39 | 0 | 0 | 31 | 0 | 0 | 15 | 0 |
| Lane Group Flow (vph) | 40 | 134 | 0 | 87 | 114 | 0 | 38 | 153 | 0 | 58 | 180 | 0 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 4.7 | 9.4 | | 7.8 | 12.5 | | 4.7 | 38.0 | | 5.3 | 38.6 | |
| Effective Green, g (s) | 4.7 | 9.4 | | 7.8 | 12.5 | | 4.7 | 38.0 | | 5.3 | 38.6 | |
| Actuated g/C Ratio | 0.06 | 0.12 | | 0.10 | 0.16 | | 0.06 | 0.50 | | 0.07 | 0.50 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 109 | 422 | | 180 | 552 | | 109 | 844 | | 123 | 883 | |
| v/s Ratio Prot | 0.02 | c0.04 | | c0.05 | c0.03 | | 0.02 | 0.09 | | c0.03 | c0.10 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.37 | 0.32 | | 0.48 | 0.21 | | 0.35 | 0.18 | | 0.47 | 0.20 | |
| Uniform Delay, d1 | 34.5 | 30.6 | | 32.4 | 27.7 | | 34.4 | 10.6 | | 34.3 | 10.5 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 2.1 | 0.4 | | 2.0 | 0.2 | | 1.9 | 0.5 | | 2.8 | 0.5 | |
| Delay (s) | 36.6 | 31.1 | | 34.5 | 27.9 | | 36.4 | 11.1 | | 37.1 | 11.0 | |
| Level of Service | D | C | | C | C | | D | B | | D | B | |
| Approach Delay (s) | | 32.2 | | | 30.3 | | | 15.4 | | | 17.0 | |
| Approach LOS | | C | | | C | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 23.4 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.27 | | |
| Actuated Cycle Length (s) | 76.5 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 44.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | | | 1.00 | 0.85 | | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (prot) | 1770 | 3467 | | 1770 | 3529 | | | 1807 | 1583 | | 1763 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (perm) | 1770 | 3467 | | 1770 | 3529 | | | 1807 | 1583 | | 1763 | |
| Volume (vph) | 59 | 858 | 135 | 110 | 781 | 15 | 132 | 82 | 121 | 35 | 85 | 59 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 59 | 858 | 135 | 110 | 781 | 15 | 132 | 82 | 121 | 35 | 85 | 59 |
| RTOR Reduction (vph) | 0 | 11 | 0 | 0 | 1 | 0 | 0 | 0 | 107 | 0 | 18 | 0 |
| Lane Group Flow (vph) | 59 | 982 | 0 | 110 | 795 | 0 | 0 | 214 | 14 | 0 | 161 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | Over | Split | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 7.2 | 27.0 | | 11.1 | 30.9 | | | 25.1 | 11.1 | | 14.0 | |
| Effective Green, g (s) | 7.2 | 27.0 | | 11.1 | 30.9 | | | 25.1 | 11.1 | | 14.0 | |
| Actuated g/C Ratio | 0.08 | 0.29 | | 0.12 | 0.33 | | | 0.27 | 0.12 | | 0.15 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 137 | 1004 | | 211 | 1170 | | | 487 | 189 | | 265 | |
| v/s Ratio Prot | 0.03 | c0.28 | | c0.06 | c0.23 | | | c0.12 | 0.01 | | c0.09 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.43 | 0.98 | | 0.52 | 0.68 | | | 0.44 | 0.08 | | 0.61 | |
| Uniform Delay, d1 | 41.0 | 32.8 | | 38.6 | 26.9 | | | 28.2 | 36.5 | | 37.0 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 2.2 | 23.0 | | 2.3 | 1.6 | | | 2.9 | 0.2 | | 3.9 | |
| Delay (s) | 43.2 | 55.8 | | 40.9 | 28.5 | | | 31.1 | 36.7 | | 41.0 | |
| Level of Service | D | E | | D | C | | | C | D | | D | |
| Approach Delay (s) | | 55.1 | | | 30.0 | | | 33.1 | | | 41.0 | |
| Approach LOS | | E | | | C | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 41.9 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.70 | | |
| Actuated Cycle Length (s) | 93.2 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 69.1% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 62 | 1061 | 2 | 14 | 933 | 36 | 1 | 3 | 12 | 19 | 0 | 17 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 62 | 1061 | 2 | 14 | 933 | 36 | 1 | 3 | 12 | 19 | 0 | 17 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 824 | | | 792 | | | | | | | |
| pX, platoon unblocked | 0.82 | | | 0.78 | | | 0.87 | 0.87 | 0.78 | 0.87 | 0.87 | 0.82 |
| vC, conflicting volume | 969 | | | 1063 | | | 1698 | 2183 | 532 | 1647 | 2166 | 484 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 750 | | | 796 | | | 1044 | 1605 | 113 | 986 | 1585 | 163 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 91 | | | 98 | | | 99 | 96 | 98 | 88 | 100 | 98 |
| cM capacity (veh/h) | 705 | | | 639 | | | 142 | 81 | 714 | 153 | 83 | 704 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 62 | 707 | 356 | 14 | 622 | 347 | 16 | 36 |
| Volume Left | 62 | 0 | 0 | 14 | 0 | 0 | 1 | 19 |
| Volume Right | 0 | 0 | 2 | 0 | 0 | 36 | 12 | 17 |
| cSH | 705 | 1700 | 1700 | 639 | 1700 | 1700 | 262 | 243 |
| Volume to Capacity | 0.09 | 0.42 | 0.21 | 0.02 | 0.37 | 0.20 | 0.06 | 0.15 |
| Queue Length 95th (ft) | 7 | 0 | 0 | 2 | 0 | 0 | 5 | 13 |
| Control Delay (s) | 10.6 | 0.0 | 0.0 | 10.8 | 0.0 | 0.0 | 19.6 | 22.3 |
| Lane LOS | B | | | B | | | C | C |
| Approach Delay (s) | 0.6 | | | 0.2 | | | 19.6 | 22.3 |
| Approach LOS | | | | | | | C | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.9 | | |
| Intersection Capacity Utilization | 51.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 0.90 | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | 0.98 | 1.00 |
| Satd. Flow (prot) | 3539 | 1583 | 1770 | 3539 | 1647 | 1504 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | 0.98 | 1.00 |
| Satd. Flow (perm) | 3539 | 1583 | 1770 | 3539 | 1647 | 1504 |
| Volume (vph) | 1050 | 47 | 80 | 1004 | 67 | 347 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 1050 | 47 | 80 | 1004 | 67 | 347 |
| RTOR Reduction (vph) | 0 | 26 | 0 | 0 | 60 | 120 |
| Lane Group Flow (vph) | 1050 | 21 | 80 | 1004 | 149 | 85 |
| Turn Type | | Over | Prot | | | Prot |
| Protected Phases | 4 | 2 | 3 | 8 | 2 | 2 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 31.1 | 35.9 | 7.8 | 42.9 | 35.9 | 35.9 |
| Effective Green, g (s) | 31.1 | 35.9 | 7.8 | 42.9 | 35.9 | 35.9 |
| Actuated g/C Ratio | 0.36 | 0.41 | 0.09 | 0.49 | 0.41 | 0.41 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 1268 | 655 | 159 | 1749 | 681 | 622 |
| v/s Ratio Prot | c0.30 | 0.01 | 0.05 | c0.28 | c0.09 | 0.06 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.83 | 0.03 | 0.50 | 0.57 | 0.22 | 0.14 |
| Uniform Delay, d1 | 25.4 | 15.1 | 37.7 | 15.5 | 16.4 | 15.8 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 4.6 | 0.1 | 2.5 | 0.5 | 0.7 | 0.5 |
| Delay (s) | 30.0 | 15.2 | 40.1 | 16.0 | 17.2 | 16.3 |
| Level of Service | C | B | D | B | B | B |
| Approach Delay (s) | 29.4 | | | 17.7 | 16.7 | |
| Approach LOS | C | | | B | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 22.5 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.52 | | |
| Actuated Cycle Length (s) | 86.8 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 55.7% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | 1.00 | 0.97 | 0.91 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 5085 | 1583 | 3433 | 5085 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 5085 | 1583 | 3433 | 5085 | 1583 |
| Volume (vph) | 442 | 743 | 282 | 364 | 567 | 103 | 161 | 1594 | 339 | 265 | 3175 | 233 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor (vph) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 85% | 100% | 100% | 85% | 100% |
| Adj. Flow (vph) | 442 | 743 | 282 | 364 | 567 | 103 | 161 | 1355 | 339 | 265 | 2699 | 233 |
| RTOR Reduction (vph) | 0 | 0 | 129 | 0 | 0 | 73 | 0 | 0 | 142 | 0 | 0 | 49 |
| Lane Group Flow (vph) | 442 | 743 | 153 | 364 | 567 | 30 | 161 | 1355 | 197 | 265 | 2699 | 184 |
| Turn Type | Prot | | Over | Prot | | Over | Prot | | Over | Prot | | Over |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 18.0 | 20.0 | 18.0 | 18.0 | 20.0 | 17.4 | 18.0 | 118.6 | 18.0 | 17.4 | 118.0 | 18.0 |
| Effective Green, g (s) | 18.0 | 20.0 | 18.0 | 18.0 | 20.0 | 17.4 | 18.0 | 118.6 | 18.0 | 17.4 | 118.0 | 18.0 |
| Actuated g/C Ratio | 0.09 | 0.11 | 0.09 | 0.09 | 0.11 | 0.09 | 0.09 | 0.62 | 0.09 | 0.09 | 0.62 | 0.09 |
| Clearance 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 |
| 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 | 3.0 |
| Lane Grp Cap (vph) | 325 | 373 | 150 | 325 | 373 | 145 | 325 | 3174 | 150 | 314 | 3158 | 150 |
| v/s Ratio Prot | c0.13 | c0.21 | c0.10 | 0.11 | 0.16 | 0.02 | 0.05 | 0.27 | 0.12 | 0.08 | c0.53 | 0.12 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 1.36 | 1.99 | 1.02 | 1.12 | 1.52 | 0.21 | 0.50 | 0.43 | 1.31 | 0.84 | 0.85 | 1.23 |
| Uniform Delay, d1 | 86.0 | 85.0 | 86.0 | 86.0 | 85.0 | 79.9 | 81.7 | 18.3 | 86.0 | 85.0 | 29.1 | 86.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.04 | 1.28 | 1.26 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 180.8 | 455.9 | 79.7 | 86.3 | 247.4 | 0.7 | 1.1 | 0.4 | 176.4 | 18.3 | 3.2 | 147.3 |
| Delay (s) | 266.8 | 540.9 | 165.7 | 172.3 | 332.4 | 80.6 | 86.1 | 23.7 | 284.9 | 103.3 | 32.3 | 233.3 |
| Level of Service | F | F | F | F | F | F | F | C | F | F | C | F |
| Approach Delay (s) | | 386.2 | | | 251.0 | | | 76.9 | | | 52.8 | |
| Approach LOS | | F | | | F | | | E | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 150.6 | HCM Level of Service | F |
| HCM Volume to Capacity ratio | 1.06 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 143.4% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 1.00 | | 1.00 | 0.97 | 0.91 | | 1.00 | 0.91 | 1.00 |
| Frt | 1.00 | | 0.85 | 1.00 | | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 5081 | | 1770 | 5085 | 1583 |
| Flt Permitted | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 5081 | | 1770 | 5085 | 1583 |
| Volume (vph) | 451 | 0 | 427 | 8 | 0 | 9 | 149 | 1612 | 7 | 32 | 3552 | 109 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor (vph) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 85% | 100% | 100% | 85% | 100% |
| Adj. Flow (vph) | 451 | 0 | 427 | 8 | 0 | 9 | 149 | 1370 | 7 | 32 | 3019 | 109 |
| RTOR Reduction (vph) | 0 | 0 | 395 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 9 |
| Lane Group Flow (vph) | 451 | 0 | 32 | 8 | 0 | 0 | 149 | 1377 | 0 | 32 | 3019 | 100 |
| Turn Type | custom | | Over | custom | | Over | Prot | | | Prot | | Perm |
| Protected Phases | | | 5 | | | 1 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 6 |
| Actuated Green, G (s) | 28.0 | | 14.4 | 28.0 | | 7.5 | 14.4 | 142.5 | | 7.5 | 135.6 | 135.6 |
| Effective Green, g (s) | 28.0 | | 14.4 | 28.0 | | 7.5 | 14.4 | 142.5 | | 7.5 | 135.6 | 135.6 |
| Actuated g/C Ratio | 0.15 | | 0.08 | 0.15 | | 0.04 | 0.08 | 0.75 | | 0.04 | 0.71 | 0.71 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 506 | | 120 | 261 | | 62 | 260 | 3811 | | 70 | 3629 | 1130 |
| v/s Ratio Prot | | | 0.02 | | | 0.00 | c0.04 | 0.27 | | 0.02 | c0.59 | |
| v/s Ratio Perm | c0.13 | | | 0.00 | | | | | | | | 0.06 |
| v/c Ratio | 0.89 | | 0.27 | 0.03 | | 0.01 | 0.57 | 0.36 | | 0.46 | 0.83 | 0.09 |
| Uniform Delay, d1 | 79.5 | | 82.8 | 69.4 | | 87.7 | 84.8 | 8.1 | | 89.3 | 19.2 | 8.3 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 0.86 | 0.60 | 0.90 |
| Incremental Delay, d2 | 17.7 | | 1.2 | 0.0 | | 0.0 | 3.0 | 0.3 | | 2.0 | 1.0 | 0.1 |
| Delay (s) | 97.2 | | 84.1 | 69.4 | | 87.7 | 87.9 | 8.4 | | 78.4 | 12.5 | 7.5 |
| Level of Service | F | | F | E | | F | F | A | | E | B | A |
| Approach Delay (s) | | 90.8 | | | 79.1 | | | 16.2 | | | 13.0 | |
| Approach LOS | | F | | | E | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 26.3 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.82 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 98.1% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Volume (veh/h) | 87 | 46 | 257 | 11 | 1 | 437 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 87 | 46 | 257 | 11 | 1 | 437 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | 692 |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 702 | 262 | | | 268 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 702 | 262 | | | 268 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 78 | 94 | | | 100 | |
| cM capacity (veh/h) | 404 | 776 | | | 1296 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 133 | 268 | 1 | 437 |
| Volume Left | 87 | 0 | 1 | 0 |
| Volume Right | 46 | 11 | 0 | 0 |
| cSH | 485 | 1700 | 1296 | 1700 |
| Volume to Capacity | 0.27 | 0.16 | 0.00 | 0.26 |
| Queue Length 95th (ft) | 28 | 0 | 0 | 0 |
| Control Delay (s) | 15.2 | 0.0 | 7.8 | 0.0 |
| Lane LOS | C | | A | |
| Approach Delay (s) | 15.2 | 0.0 | 0.0 | |
| Approach LOS | C | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.4 | | |
| Intersection Capacity Utilization | 37.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 9 | 3 | 0 | 0 | 73 | 7 | 7 | 11 | 0 | 0 | 1 | 5 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 9 | 3 | 0 | 0 | 73 | 7 | 7 | 11 | 0 | 0 | 1 | 5 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 12 | 80 | 18 | 6 |
| Volume Left (vph) | 9 | 0 | 7 | 0 |
| Volume Right (vph) | 0 | 7 | 0 | 5 |
| Hadj (s) | 0.18 | -0.02 | 0.11 | -0.47 |
| Departure Headway (s) | 4.2 | 3.9 | 4.2 | 3.6 |
| Degree Utilization, x | 0.01 | 0.09 | 0.02 | 0.01 |
| Capacity (veh/h) | 841 | 902 | 826 | 957 |
| Control Delay (s) | 7.3 | 7.3 | 7.3 | 6.7 |
| Approach Delay (s) | 7.3 | 7.3 | 7.3 | 6.7 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.3 | | |
| HCM Level of Service | A | | |
| Intersection Capacity Utilization | 20.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 3433 | 3472 | | 3433 | 3539 | 1583 | 3433 | 5019 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 3433 | 3472 | | 3433 | 3539 | 1583 | 3433 | 5019 | |
| Volume (vph) | 152 | 719 | 314 | 348 | 729 | 105 | 309 | 610 | 181 | 170 | 1078 | 102 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 152 | 719 | 314 | 348 | 729 | 105 | 309 | 610 | 181 | 170 | 1078 | 102 |
| RTOR Reduction (vph) | 0 | 0 | 271 | 0 | 9 | 0 | 0 | 0 | 169 | 0 | 10 | 0 |
| Lane Group Flow (vph) | 152 | 719 | 43 | 348 | 825 | 0 | 309 | 610 | 12 | 170 | 1170 | 0 |
| Turn Type | Prot | | Over | Prot | | | Prot | | Over | Prot | | |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 14.4 | 32.0 | 15.1 | 7.0 | 24.6 | | 15.1 | 44.6 | 7.0 | 10.4 | 39.9 | |
| Effective Green, g (s) | 14.4 | 32.0 | 15.1 | 7.0 | 24.6 | | 15.1 | 44.6 | 7.0 | 10.4 | 39.9 | |
| Actuated g/C Ratio | 0.13 | 0.29 | 0.14 | 0.06 | 0.22 | | 0.14 | 0.41 | 0.06 | 0.09 | 0.36 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 232 | 1030 | 217 | 218 | 776 | | 471 | 1435 | 101 | 325 | 1821 | |
| v/s Ratio Prot | c0.09 | 0.20 | 0.03 | c0.10 | c0.24 | | c0.09 | 0.17 | 0.01 | 0.05 | c0.23 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.66 | 0.70 | 0.20 | 1.60 | 1.06 | | 0.66 | 0.43 | 0.11 | 0.52 | 0.64 | |
| Uniform Delay, d1 | 45.4 | 34.7 | 42.1 | 51.5 | 42.7 | | 45.0 | 23.5 | 48.6 | 47.4 | 29.1 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 6.5 | 2.1 | 0.5 | 288.9 | 50.3 | | 3.3 | 0.9 | 0.5 | 1.5 | 1.8 | |
| Delay (s) | 51.9 | 36.8 | 42.5 | 340.4 | 93.0 | | 48.3 | 24.4 | 49.1 | 49.0 | 30.9 | |
| Level of Service | D | D | D | F | F | | D | C | D | D | C | |
| Approach Delay (s) | | 40.3 | | | 165.8 | | | 35.2 | | | 33.2 | |
| Approach LOS | | D | | | F | | | D | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 67.9 | HCM Level of Service | E |
| HCM Volume to Capacity ratio | 0.82 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 77.2% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Volume (veh/h) | 50 | 1043 | 903 | 22 | 6 | 19 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 50 | 1043 | 903 | 22 | 6 | 19 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | 516 | | | |
| pX, platoon unblocked | 0.82 | | | | 0.82 | 0.82 |
| vC, conflicting volume | 925 | | | | 1524 | 452 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 690 | | | | 1420 | 113 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 93 | | | | 94 | 97 |
| cM capacity (veh/h) | 739 | | | | 97 | 754 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | SB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 50 | 522 | 522 | 452 | 452 | 22 | 25 |
| Volume Left | 50 | 0 | 0 | 0 | 0 | 0 | 6 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 22 | 19 |
| cSH | 739 | 1700 | 1700 | 1700 | 1700 | 1700 | 288 |
| Volume to Capacity | 0.07 | 0.31 | 0.31 | 0.27 | 0.27 | 0.01 | 0.09 |
| Queue Length 95th (ft) | 5 | 0 | 0 | 0 | 0 | 0 | 7 |
| Control Delay (s) | 10.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 18.7 |
| Lane LOS | B | | | | | | C |
| Approach Delay (s) | 0.5 | | | 0.0 | | | 18.7 |
| Approach LOS | | | | | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.5 | | |
| Intersection Capacity Utilization | 41.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 42 | 1033 | 0 | 0 | 955 | 14 | 0 | 0 | 34 | 3 | 0 | 34 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 42 | 1033 | 0 | 0 | 955 | 14 | 0 | 0 | 34 | 3 | 0 | 34 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 561 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.83 | | | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | |
| vC, conflicting volume | 969 | | | 1033 | | | 1628 | 2086 | 516 | 1590 | 2072 | 478 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 969 | | | 831 | | | 1551 | 2104 | 206 | 1504 | 2087 | 478 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 94 | | | 100 | | | 100 | 100 | 95 | 95 | 100 | 94 |
| cM capacity (veh/h) | 707 | | | 659 | | | 57 | 40 | 662 | 63 | 41 | 534 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 42 | 516 | 516 | 478 | 478 | 14 | 34 | 37 |
| Volume Left | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 14 | 34 | 34 |
| cSH | 707 | 1700 | 1700 | 1700 | 1700 | 1700 | 662 | 332 |
| Volume to Capacity | 0.06 | 0.30 | 0.30 | 0.28 | 0.28 | 0.01 | 0.05 | 0.11 |
| Queue Length 95th (ft) | 5 | 0 | 0 | 0 | 0 | 0 | 4 | 9 |
| Control Delay (s) | 10.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.7 | 17.2 |
| Lane LOS | B | | | | | | B | C |
| Approach Delay (s) | 0.4 | | | 0.0 | | | 10.7 | 17.2 |
| Approach LOS | | | | | | | B | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.7 | | |
| Intersection Capacity Utilization | 45.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.97 | | 1.00 | 0.96 | | 1.00 | 0.92 | | 1.00 | 0.95 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3419 | | 1770 | 3383 | | 1770 | 1707 | | 1770 | 1778 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3419 | | 1770 | 3383 | | 1770 | 1707 | | 1770 | 1778 | |
| Volume (vph) | 33 | 249 | 73 | 84 | 110 | 46 | 69 | 146 | 183 | 151 | 298 | 129 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 33 | 249 | 73 | 84 | 110 | 46 | 69 | 146 | 183 | 151 | 298 | 129 |
| RTOR Reduction (vph) | 0 | 26 | 0 | 0 | 37 | 0 | 0 | 32 | 0 | 0 | 12 | 0 |
| Lane Group Flow (vph) | 33 | 296 | 0 | 84 | 119 | 0 | 69 | 297 | 0 | 151 | 415 | 0 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 4.5 | 14.2 | | 8.0 | 17.7 | | 7.4 | 41.5 | | 10.8 | 44.9 | |
| Effective Green, g (s) | 4.5 | 14.2 | | 8.0 | 17.7 | | 7.4 | 41.5 | | 10.8 | 44.9 | |
| Actuated g/C Ratio | 0.05 | 0.16 | | 0.09 | 0.20 | | 0.08 | 0.46 | | 0.12 | 0.50 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 88 | 536 | | 156 | 662 | | 145 | 783 | | 211 | 882 | |
| v/s Ratio Prot | 0.02 | c0.09 | | c0.05 | c0.04 | | 0.04 | 0.17 | | c0.09 | c0.23 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.38 | 0.55 | | 0.54 | 0.18 | | 0.48 | 0.38 | | 0.72 | 0.47 | |
| Uniform Delay, d1 | 41.6 | 35.2 | | 39.5 | 30.3 | | 39.7 | 16.1 | | 38.4 | 15.0 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 2.7 | 1.2 | | 3.5 | 0.1 | | 2.5 | 1.4 | | 11.0 | 1.8 | |
| Delay (s) | 44.3 | 36.4 | | 43.0 | 30.5 | | 42.2 | 17.4 | | 49.3 | 16.8 | |
| Level of Service | D | D | | D | C | | D | B | | D | B | |
| Approach Delay (s) | | 37.2 | | | 34.9 | | | 21.7 | | | 25.3 | |
| Approach LOS | | D | | | C | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 28.5 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.55 | | |
| Actuated Cycle Length (s) | 90.5 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 57.8% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | | | 1.00 | 0.85 | | 0.95 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (prot) | 1770 | 3457 | | 1770 | 3531 | | | 1811 | 1583 | | 1748 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (perm) | 1770 | 3457 | | 1770 | 3531 | | | 1811 | 1583 | | 1748 | |
| Volume (vph) | 27 | 697 | 128 | 122 | 660 | 10 | 102 | 75 | 94 | 27 | 48 | 46 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 27 | 697 | 128 | 122 | 660 | 10 | 102 | 75 | 94 | 27 | 48 | 46 |
| RTOR Reduction (vph) | 0 | 12 | 0 | 0 | 1 | 0 | 0 | 0 | 84 | 0 | 23 | 0 |
| Lane Group Flow (vph) | 27 | 813 | 0 | 122 | 669 | 0 | 0 | 177 | 10 | 0 | 98 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | Over | Split | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 2.9 | 26.6 | | 9.2 | 32.9 | | | 26.4 | 9.2 | | 8.7 | |
| Effective Green, g (s) | 2.9 | 26.6 | | 9.2 | 32.9 | | | 26.4 | 9.2 | | 8.7 | |
| Actuated g/C Ratio | 0.03 | 0.31 | | 0.11 | 0.38 | | | 0.30 | 0.11 | | 0.10 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 59 | 1058 | | 187 | 1337 | | | 550 | 168 | | 175 | |
| v/s Ratio Prot | 0.02 | c0.24 | | c0.07 | 0.19 | | | c0.10 | 0.01 | | c0.06 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.46 | 0.77 | | 0.65 | 0.50 | | | 0.32 | 0.06 | | 0.56 | |
| Uniform Delay, d1 | 41.2 | 27.4 | | 37.3 | 20.7 | | | 23.3 | 35.0 | | 37.3 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 5.5 | 3.4 | | 7.9 | 0.3 | | | 1.5 | 0.1 | | 3.8 | |
| Delay (s) | 46.8 | 30.8 | | 45.2 | 21.0 | | | 24.9 | 35.1 | | 41.1 | |
| Level of Service | D | C | | D | C | | | C | D | | D | |
| Approach Delay (s) | | 31.3 | | | 24.7 | | | 28.4 | | | 41.1 | |
| Approach LOS | | C | | | C | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 28.9 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.56 | | |
| Actuated Cycle Length (s) | 86.9 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 56.4% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 35 | 783 | 46 | 35 | 795 | 30 | 1 | 0 | 5 | 21 | 1 | 25 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 35 | 783 | 46 | 35 | 795 | 30 | 1 | 0 | 5 | 21 | 1 | 25 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 824 | | | 792 | | | | | | | |
| pX, platoon unblocked | 0.86 | | | 0.85 | | | 0.92 | 0.92 | 0.85 | 0.92 | 0.92 | 0.86 |
| vC, conflicting volume | 825 | | | 829 | | | 1369 | 1771 | 414 | 1346 | 1779 | 412 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 628 | | | 621 | | | 846 | 1283 | 133 | 822 | 1291 | 146 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 96 | | | 96 | | | 100 | 100 | 99 | 91 | 99 | 97 |
| cM capacity (veh/h) | 814 | | | 812 | | | 212 | 138 | 757 | 228 | 137 | 749 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 35 | 522 | 307 | 35 | 530 | 295 | 6 | 47 |
| Volume Left | 35 | 0 | 0 | 35 | 0 | 0 | 1 | 21 |
| Volume Right | 0 | 0 | 46 | 0 | 0 | 30 | 5 | 25 |
| cSH | 814 | 1700 | 1700 | 812 | 1700 | 1700 | 530 | 354 |
| Volume to Capacity | 0.04 | 0.31 | 0.18 | 0.04 | 0.31 | 0.17 | 0.01 | 0.13 |
| Queue Length 95th (ft) | 3 | 0 | 0 | 3 | 0 | 0 | 1 | 11 |
| Control Delay (s) | 9.6 | 0.0 | 0.0 | 9.6 | 0.0 | 0.0 | 11.9 | 16.7 |
| Lane LOS | A | | | A | | | B | C |
| Approach Delay (s) | 0.4 | | | 0.4 | | | 11.9 | 16.7 |
| Approach LOS | | | | | | | B | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.9 | | |
| Intersection Capacity Utilization | 41.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 0.95 | | 0.88 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (prot) | 3539 | 1583 | 1770 | 3539 | | 2787 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (perm) | 3539 | 1583 | 1770 | 3539 | | 2787 |
| Volume (vph) | 745 | 92 | 190 | 878 | 0 | 84 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 745 | 92 | 190 | 878 | 0 | 84 |
| RTOR Reduction (vph) | 0 | 54 | 0 | 0 | 0 | 49 |
| Lane Group Flow (vph) | 745 | 38 | 190 | 878 | 0 | 35 |
| Turn Type | | custom | Prot | | | custom |
| Protected Phases | 4 | 2 | 3 | 8 | | 2 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 23.7 | 35.6 | 14.2 | 41.9 | | 35.6 |
| Effective Green, g (s) | 23.7 | 35.6 | 14.2 | 41.9 | | 35.6 |
| Actuated g/C Ratio | 0.28 | 0.42 | 0.17 | 0.49 | | 0.42 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 981 | 659 | 294 | 1734 | | 1160 |
| v/s Ratio Prot | c0.21 | c0.02 | c0.11 | 0.25 | | 0.01 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.76 | 0.06 | 0.65 | 0.51 | | 0.03 |
| Uniform Delay, d1 | 28.3 | 14.9 | 33.3 | 14.8 | | 14.7 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 3.4 | 0.2 | 4.8 | 0.2 | | 0.0 |
| Delay (s) | 31.7 | 15.1 | 38.1 | 15.0 | | 14.8 |
| Level of Service | C | B | D | B | | B |
| Approach Delay (s) | 29.9 | | | 19.1 | 14.8 | |
| Approach LOS | C | | | B | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 23.5 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.40 | | |
| Actuated Cycle Length (s) | 85.5 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 37.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | 1.00 | 0.97 | 0.91 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 5085 | 1583 | 3433 | 5085 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 5085 | 1583 | 3433 | 5085 | 1583 |
| Volume (vph) | 316 | 364 | 113 | 322 | 602 | 227 | 171 | 2982 | 199 | 122 | 1425 | 200 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor (vph) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 85% | 100% | 100% | 85% | 100% |
| Adj. Flow (vph) | 316 | 364 | 113 | 322 | 602 | 227 | 171 | 2535 | 199 | 122 | 1211 | 200 |
| RTOR Reduction (vph) | 0 | 0 | 105 | 0 | 0 | 154 | 0 | 0 | 45 | 0 | 0 | 94 |
| Lane Group Flow (vph) | 316 | 364 | 8 | 322 | 602 | 73 | 171 | 2535 | 154 | 122 | 1211 | 106 |
| Turn Type | Prot | | Over | Prot | | Over | Prot | | Over | Prot | | Over |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 17.0 | 24.6 | 13.2 | 20.4 | 28.0 | 14.2 | 13.2 | 114.8 | 20.4 | 14.2 | 115.8 | 17.0 |
| Effective Green, g (s) | 17.0 | 24.6 | 13.2 | 20.4 | 28.0 | 14.2 | 13.2 | 114.8 | 20.4 | 14.2 | 115.8 | 17.0 |
| Actuated g/C Ratio | 0.09 | 0.13 | 0.07 | 0.11 | 0.15 | 0.07 | 0.07 | 0.60 | 0.11 | 0.07 | 0.61 | 0.09 |
| Clearance 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 |
| 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 | 3.0 |
| Lane Grp Cap (vph) | 307 | 458 | 110 | 369 | 522 | 118 | 239 | 3072 | 170 | 257 | 3099 | 142 |
| v/s Ratio Prot | c0.09 | 0.10 | 0.00 | 0.09 | c0.17 | 0.05 | c0.05 | c0.50 | 0.10 | 0.04 | 0.24 | 0.07 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 1.03 | 0.79 | 0.07 | 0.87 | 1.15 | 0.62 | 0.72 | 0.83 | 0.91 | 0.47 | 0.39 | 0.75 |
| Uniform Delay, d1 | 86.5 | 80.3 | 82.7 | 83.5 | 81.0 | 85.3 | 86.6 | 29.7 | 83.9 | 84.3 | 19.0 | 84.4 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.94 | 1.24 | 1.12 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 59.1 | 9.2 | 0.3 | 19.7 | 89.1 | 9.8 | 8.1 | 2.2 | 37.7 | 1.4 | 0.4 | 19.2 |
| Delay (s) | 145.6 | 89.5 | 82.9 | 103.2 | 170.1 | 95.1 | 89.6 | 39.2 | 131.7 | 85.7 | 19.4 | 103.6 |
| Level of Service | F | F | F | F | F | F | F | D | F | F | B | F |
| Approach Delay (s) | | 110.9 | | | 136.6 | | | 48.5 | | | 35.7 | |
| Approach LOS | | F | | | F | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 69.0 | HCM Level of Service | E |
| HCM Volume to Capacity ratio | 0.89 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 96.3% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 1.00 | | 1.00 | 0.97 | 0.91 | | 1.00 | 0.91 | 1.00 |
| Frt | 1.00 | | 0.85 | 1.00 | | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 5083 | | 1770 | 5085 | 1583 |
| Flt Permitted | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 5083 | | 1770 | 5085 | 1583 |
| Volume (vph) | 132 | 0 | 56 | 12 | 0 | 12 | 223 | 3103 | 8 | 10 | 1569 | 364 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor (vph) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 85% | 100% | 100% | 85% | 100% |
| Adj. Flow (vph) | 132 | 0 | 56 | 12 | 0 | 12 | 223 | 2638 | 8 | 10 | 1334 | 364 |
| RTOR Reduction (vph) | 0 | 0 | 51 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 49 |
| Lane Group Flow (vph) | 132 | 0 | 5 | 12 | 0 | 0 | 223 | 2646 | 0 | 10 | 1334 | 315 |
| Turn Type | custom | | Over | custom | | Over | Prot | | | Prot | | Perm |
| Protected Phases | | | 5 | | | 1 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 6 |
| Actuated Green, G (s) | 12.0 | | 16.4 | 12.0 | | 4.3 | 16.4 | 161.7 | | 4.3 | 149.6 | 149.6 |
| Effective Green, g (s) | 12.0 | | 16.4 | 12.0 | | 4.3 | 16.4 | 161.7 | | 4.3 | 149.6 | 149.6 |
| Actuated g/C Ratio | 0.06 | | 0.09 | 0.06 | | 0.02 | 0.09 | 0.85 | | 0.02 | 0.79 | 0.79 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 217 | | 137 | 112 | | 36 | 296 | 4326 | | 40 | 4004 | 1246 |
| v/s Ratio Prot | | | 0.00 | | | 0.00 | c0.06 | c0.52 | | 0.01 | 0.26 | |
| v/s Ratio Perm | c0.04 | | | 0.01 | | | | | | | | 0.20 |
| v/c Ratio | 0.61 | | 0.04 | 0.11 | | 0.01 | 0.75 | 0.61 | | 0.25 | 0.33 | 0.25 |
| Uniform Delay, d1 | 86.7 | | 79.6 | 83.9 | | 90.8 | 84.8 | 4.4 | | 91.3 | 5.8 | 5.4 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 0.94 | 0.75 | 0.48 |
| Incremental Delay, d2 | 4.8 | | 0.1 | 0.4 | | 0.1 | 10.4 | 0.7 | | 2.9 | 0.2 | 0.4 |
| Delay (s) | 91.5 | | 79.7 | 84.4 | | 90.8 | 95.2 | 5.0 | | 89.1 | 4.5 | 3.0 |
| Level of Service | F | | E | F | | F | F | A | | F | A | A |
| Approach Delay (s) | | 88.0 | | | 87.6 | | | 12.1 | | | 4.7 | |
| Approach LOS | | F | | | F | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 12.8 | HCM Level of Service | B |
| HCM Volume to Capacity ratio | 0.62 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 75.3% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Volume (veh/h) | 7 | 17 | 380 | 114 | 57 | 203 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 7 | 17 | 380 | 114 | 57 | 203 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | 692 |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 754 | 437 | | | 494 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 754 | 437 | | | 494 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 98 | 97 | | | 95 | |
| cM capacity (veh/h) | 357 | 620 | | | 1070 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 24 | 494 | 57 | 203 |
| Volume Left | 7 | 0 | 57 | 0 |
| Volume Right | 17 | 114 | 0 | 0 |
| cSH | 510 | 1700 | 1070 | 1700 |
| Volume to Capacity | 0.05 | 0.29 | 0.05 | 0.12 |
| Queue Length 95th (ft) | 4 | 0 | 4 | 0 |
| Control Delay (s) | 12.4 | 0.0 | 8.6 | 0.0 |
| Lane LOS | B | | A | |
| Approach Delay (s) | 12.4 | 0.0 | 1.9 | |
| Approach LOS | B | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.0 | | |
| Intersection Capacity Utilization | 43.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 2 | 97 | 16 | 1 | 29 | 2 | 0 | 0 | 0 | 46 | 16 | 9 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 2 | 97 | 16 | 1 | 29 | 2 | 0 | 0 | 0 | 46 | 16 | 9 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 115 | 32 | 0 | 71 |
| Volume Left (vph) | 2 | 1 | 0 | 46 |
| Volume Right (vph) | 16 | 2 | 0 | 9 |
| Hadj (s) | -0.05 | 0.00 | 0.00 | 0.09 |
| Departure Headway (s) | 4.0 | 4.2 | 4.3 | 4.3 |
| Degree Utilization, x | 0.13 | 0.04 | 0.00 | 0.08 |
| Capacity (veh/h) | 868 | 839 | 812 | 808 |
| Control Delay (s) | 7.7 | 7.3 | 7.3 | 7.7 |
| Approach Delay (s) | 7.7 | 7.3 | 0.0 | 7.7 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.6 | | |
| HCM Level of Service | A | | |
| Intersection Capacity Utilization | 17.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 3433 | 3471 | | 3433 | 3539 | 1583 | 3433 | 4996 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 3433 | 3471 | | 3433 | 3539 | 1583 | 3433 | 4996 | |
| Volume (vph) | 137 | 557 | 266 | 233 | 560 | 82 | 276 | 921 | 345 | 140 | 769 | 102 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 137 | 557 | 266 | 233 | 560 | 82 | 276 | 921 | 345 | 140 | 769 | 102 |
| RTOR Reduction (vph) | 0 | 0 | 232 | 0 | 10 | 0 | 0 | 0 | 256 | 0 | 14 | 0 |
| Lane Group Flow (vph) | 137 | 557 | 34 | 233 | 632 | 0 | 276 | 921 | 89 | 140 | 857 | 0 |
| Turn Type | Prot | | Over | Prot | | | Prot | | Over | Prot | | |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 13.6 | 32.0 | 14.1 | 7.0 | 25.4 | | 14.1 | 45.3 | 7.0 | 9.7 | 40.9 | |
| Effective Green, g (s) | 13.6 | 32.0 | 14.1 | 7.0 | 25.4 | | 14.1 | 45.3 | 7.0 | 9.7 | 40.9 | |
| Actuated g/C Ratio | 0.12 | 0.29 | 0.13 | 0.06 | 0.23 | | 0.13 | 0.41 | 0.06 | 0.09 | 0.37 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 219 | 1030 | 203 | 218 | 801 | | 440 | 1457 | 101 | 303 | 1858 | |
| v/s Ratio Prot | c0.08 | 0.16 | 0.02 | c0.07 | c0.18 | | c0.08 | c0.26 | 0.06 | 0.04 | 0.17 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.63 | 0.54 | 0.17 | 1.07 | 0.79 | | 0.63 | 0.63 | 0.88 | 0.46 | 0.46 | |
| Uniform Delay, d1 | 45.8 | 32.8 | 42.7 | 51.5 | 39.8 | | 45.5 | 25.7 | 51.1 | 47.7 | 26.2 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 5.5 | 0.6 | 0.4 | 80.4 | 5.2 | | 2.8 | 2.1 | 54.1 | 1.1 | 0.8 | |
| Delay (s) | 51.3 | 33.4 | 43.1 | 131.9 | 45.0 | | 48.2 | 27.8 | 105.2 | 48.8 | 27.0 | |
| Level of Service | D | C | D | F | D | | D | C | F | D | C | |
| Approach Delay (s) | | 38.6 | | | 68.1 | | | 48.8 | | | 30.0 | |
| Approach LOS | | D | | | E | | | D | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 46.1 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.68 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 70.3% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Volume (veh/h) | 13 | 917 | 795 | 21 | 8 | 22 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 13 | 917 | 795 | 21 | 8 | 22 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | 516 | | | |
| pX, platoon unblocked | 0.87 | | | | 0.87 | 0.87 |
| vC, conflicting volume | 816 | | | | 1280 | 398 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 635 | | | | 1169 | 153 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 98 | | | | 95 | 97 |
| cM capacity (veh/h) | 819 | | | | 159 | 751 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | SB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 13 | 458 | 458 | 398 | 398 | 21 | 30 |
| Volume Left | 13 | 0 | 0 | 0 | 0 | 0 | 8 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 21 | 22 |
| cSH | 819 | 1700 | 1700 | 1700 | 1700 | 1700 | 377 |
| Volume to Capacity | 0.02 | 0.27 | 0.27 | 0.23 | 0.23 | 0.01 | 0.08 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 0 | 0 | 6 |
| Control Delay (s) | 9.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15.4 |
| Lane LOS | A | | | | | | C |
| Approach Delay (s) | 0.1 | | | 0.0 | | | 15.4 |
| Approach LOS | | | | | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.3 | | |
| Intersection Capacity Utilization | 35.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 20 | 997 | 0 | 0 | 811 | 10 | 0 | 0 | 4 | 13 | 0 | 38 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 20 | 997 | 0 | 0 | 811 | 10 | 0 | 0 | 4 | 13 | 0 | 38 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 561 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.88 | | | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | |
| vC, conflicting volume | 821 | | | 997 | | | 1480 | 1858 | 498 | 1354 | 1848 | 406 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 821 | | | 860 | | | 1410 | 1839 | 293 | 1265 | 1827 | 406 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 100 | | | 100 | 100 | 99 | 88 | 100 | 94 |
| cM capacity (veh/h) | 804 | | | 684 | | | 80 | 64 | 618 | 108 | 65 | 595 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 20 | 498 | 498 | 406 | 406 | 10 | 4 | 51 |
| Volume Left | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 10 | 4 | 38 |
| cSH | 804 | 1700 | 1700 | 1700 | 1700 | 1700 | 618 | 277 |
| Volume to Capacity | 0.02 | 0.29 | 0.29 | 0.24 | 0.24 | 0.01 | 0.01 | 0.18 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| Control Delay (s) | 9.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.9 | 20.9 |
| Lane LOS | A | | | | | | B | C |
| Approach Delay (s) | 0.2 | | | 0.0 | | | 10.9 | 20.9 |
| Approach LOS | | | | | | | B | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.7 | | |
| Intersection Capacity Utilization | 44.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.94 | | 1.00 | 0.94 | | 1.00 | 0.97 | | 1.00 | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3319 | | 1770 | 3309 | | 1770 | 1816 | | 1770 | 1786 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3319 | | 1770 | 3309 | | 1770 | 1816 | | 1770 | 1786 | |
| Volume (vph) | 147 | 97 | 69 | 115 | 233 | 178 | 60 | 209 | 42 | 33 | 105 | 40 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 147 | 97 | 69 | 115 | 233 | 178 | 60 | 209 | 42 | 33 | 105 | 40 |
| RTOR Reduction (vph) | 0 | 57 | 0 | 0 | 137 | 0 | 0 | 5 | 0 | 0 | 10 | 0 |
| Lane Group Flow (vph) | 147 | 109 | 0 | 115 | 274 | 0 | 60 | 246 | 0 | 33 | 135 | 0 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 9.5 | 13.6 | | 8.4 | 12.5 | | 5.0 | 35.5 | | 2.9 | 33.4 | |
| Effective Green, g (s) | 9.5 | 13.6 | | 8.4 | 12.5 | | 5.0 | 35.5 | | 2.9 | 33.4 | |
| Actuated g/C Ratio | 0.12 | 0.18 | | 0.11 | 0.16 | | 0.07 | 0.46 | | 0.04 | 0.44 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 220 | 591 | | 195 | 541 | | 116 | 844 | | 67 | 781 | |
| v/s Ratio Prot | c0.08 | 0.03 | | 0.06 | c0.08 | | c0.03 | c0.14 | | 0.02 | 0.08 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.67 | 0.18 | | 0.59 | 0.51 | | 0.52 | 0.29 | | 0.49 | 0.17 | |
| Uniform Delay, d1 | 31.9 | 26.7 | | 32.4 | 29.1 | | 34.5 | 12.7 | | 36.0 | 13.1 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 7.5 | 0.2 | | 4.5 | 0.7 | | 3.9 | 0.9 | | 5.6 | 0.5 | |
| Delay (s) | 39.4 | 26.8 | | 36.9 | 29.9 | | 38.4 | 13.5 | | 41.6 | 13.6 | |
| Level of Service | D | C | | D | C | | D | B | | D | B | |
| Approach Delay (s) | | 32.7 | | | 31.4 | | | 18.3 | | | 18.8 | |
| Approach LOS | | C | | | C | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 27.0 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.39 | | |
| Actuated Cycle Length (s) | 76.4 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 53.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | | | 1.00 | 0.85 | | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.96 | 1.00 | | 0.98 | |
| Satd. Flow (prot) | 1770 | 3463 | | 1770 | 3524 | | | 1797 | 1583 | | 1754 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.96 | 1.00 | | 0.98 | |
| Satd. Flow (perm) | 1770 | 3463 | | 1770 | 3524 | | | 1797 | 1583 | | 1754 | |
| Volume (vph) | 17 | 515 | 86 | 61 | 519 | 15 | 113 | 41 | 99 | 28 | 33 | 29 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 17 | 515 | 86 | 61 | 519 | 15 | 113 | 41 | 99 | 28 | 33 | 29 |
| RTOR Reduction (vph) | 0 | 12 | 0 | 0 | 1 | 0 | 0 | 0 | 91 | 0 | 18 | 0 |
| Lane Group Flow (vph) | 17 | 589 | 0 | 61 | 533 | 0 | 0 | 154 | 8 | 0 | 72 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | Over | Split | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 1.3 | 20.3 | | 6.5 | 25.5 | | | 26.8 | 6.5 | | 7.8 | |
| Effective Green, g (s) | 1.3 | 20.3 | | 6.5 | 25.5 | | | 26.8 | 6.5 | | 7.8 | |
| Actuated g/C Ratio | 0.02 | 0.26 | | 0.08 | 0.33 | | | 0.35 | 0.08 | | 0.10 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 30 | 908 | | 149 | 1161 | | | 622 | 133 | | 177 | |
| v/s Ratio Prot | 0.01 | c0.17 | | c0.03 | 0.15 | | | c0.09 | 0.01 | | c0.04 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.57 | 0.65 | | 0.41 | 0.46 | | | 0.25 | 0.06 | | 0.41 | |
| Uniform Delay, d1 | 37.8 | 25.4 | | 33.6 | 20.5 | | | 18.1 | 32.6 | | 32.6 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 22.3 | 1.6 | | 1.8 | 0.3 | | | 0.9 | 0.2 | | 1.5 | |
| Delay (s) | 60.0 | 27.0 | | 35.5 | 20.8 | | | 19.0 | 32.8 | | 34.2 | |
| Level of Service | E | C | | D | C | | | B | C | | C | |
| Approach Delay (s) | | 27.9 | | | 22.3 | | | 24.4 | | | 34.2 | |
| Approach LOS | | C | | | C | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 25.6 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.42 | | |
| Actuated Cycle Length (s) | 77.4 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 47.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 22 | 611 | 20 | 20 | 616 | 32 | 2 | 4 | 38 | 15 | 0 | 15 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 22 | 611 | 20 | 20 | 616 | 32 | 2 | 4 | 38 | 15 | 0 | 15 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 824 | | | 792 | | | | | | | |
| pX, platoon unblocked | 0.92 | | | 0.93 | | | 0.96 | 0.96 | 0.93 | 0.96 | 0.96 | 0.92 |
| vC, conflicting volume | 648 | | | 631 | | | 1028 | 1353 | 316 | 1062 | 1347 | 324 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 530 | | | 526 | | | 760 | 1100 | 187 | 795 | 1094 | 178 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 98 | | | 99 | 98 | 95 | 94 | 100 | 98 |
| cM capacity (veh/h) | 950 | | | 963 | | | 267 | 193 | 765 | 241 | 194 | 767 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 22 | 407 | 224 | 20 | 411 | 237 | 44 | 30 |
| Volume Left | 22 | 0 | 0 | 20 | 0 | 0 | 2 | 15 |
| Volume Right | 0 | 0 | 20 | 0 | 0 | 32 | 38 | 15 |
| cSH | 950 | 1700 | 1700 | 963 | 1700 | 1700 | 565 | 366 |
| Volume to Capacity | 0.02 | 0.24 | 0.13 | 0.02 | 0.24 | 0.14 | 0.08 | 0.08 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 2 | 0 | 0 | 6 | 7 |
| Control Delay (s) | 8.9 | 0.0 | 0.0 | 8.8 | 0.0 | 0.0 | 11.9 | 15.7 |
| Lane LOS | A | | | A | | | B | C |
| Approach Delay (s) | 0.3 | | | 0.3 | | | 11.9 | 15.7 |
| Approach LOS | | | | | | | B | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.0 | | |
| Intersection Capacity Utilization | 33.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 0.95 | | 0.88 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (prot) | 3539 | 1583 | 1770 | 3539 | | 2787 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (perm) | 3539 | 1583 | 1770 | 3539 | | 2787 |
| Volume (vph) | 641 | 43 | 128 | 621 | 0 | 227 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 641 | 43 | 128 | 621 | 0 | 227 |
| RTOR Reduction (vph) | 0 | 23 | 0 | 0 | 0 | 120 |
| Lane Group Flow (vph) | 641 | 20 | 128 | 621 | 0 | 107 |
| Turn Type | | custom | Prot | | | custom |
| Protected Phases | 4 | 2 | 3 | 8 | | 2 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 19.1 | 36.1 | 9.1 | 32.2 | | 36.1 |
| Effective Green, g (s) | 19.1 | 36.1 | 9.1 | 32.2 | | 36.1 |
| Actuated g/C Ratio | 0.25 | 0.47 | 0.12 | 0.42 | | 0.47 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 886 | 749 | 211 | 1494 | | 1319 |
| v/s Ratio Prot | c0.18 | 0.01 | c0.07 | 0.18 | | c0.04 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.72 | 0.03 | 0.61 | 0.42 | | 0.08 |
| Uniform Delay, d1 | 26.2 | 10.7 | 31.9 | 15.5 | | 11.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 2.9 | 0.1 | 4.9 | 0.2 | | 0.1 |
| Delay (s) | 29.1 | 10.8 | 36.8 | 15.6 | | 11.1 |
| Level of Service | C | B | D | B | | B |
| Approach Delay (s) | 28.0 | | | 19.3 | 11.1 | |
| Approach LOS | C | | | B | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 21.7 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.35 | | |
| Actuated Cycle Length (s) | 76.3 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 32.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.86 | 1.00 | 0.97 | 0.86 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 6408 | 1583 | 3433 | 6408 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 6408 | 1583 | 3433 | 6408 | 1583 |
| Volume (vph) | 315 | 409 | 132 | 326 | 443 | 156 | 187 | 1414 | 274 | 175 | 1536 | 132 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 315 | 409 | 132 | 326 | 443 | 156 | 187 | 1414 | 274 | 175 | 1536 | 132 |
| RTOR Reduction (vph) | 0 | 0 | 121 | 0 | 0 | 142 | 0 | 0 | 139 | 0 | 0 | 62 |
| Lane Group Flow (vph) | 315 | 409 | 11 | 326 | 443 | 14 | 187 | 1414 | 135 | 175 | 1536 | 70 |
| Turn Type | Prot | | Over | Prot | | Over | Prot | | Over | Prot | | Over |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 18.0 | 20.0 | 15.3 | 18.0 | 20.0 | 14.7 | 15.3 | 121.3 | 18.0 | 14.7 | 120.7 | 18.0 |
| Effective Green, g (s) | 18.0 | 20.0 | 15.3 | 18.0 | 20.0 | 14.7 | 15.3 | 121.3 | 18.0 | 14.7 | 120.7 | 18.0 |
| Actuated g/C Ratio | 0.09 | 0.11 | 0.08 | 0.09 | 0.11 | 0.08 | 0.08 | 0.64 | 0.09 | 0.08 | 0.64 | 0.09 |
| Clearance 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 |
| 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 | 3.0 |
| Lane Grp Cap (vph) | 325 | 373 | 127 | 325 | 373 | 122 | 276 | 4091 | 150 | 266 | 4071 | 150 |
| v/s Ratio Prot | 0.09 | 0.12 | 0.01 | c0.09 | c0.13 | 0.01 | c0.05 | 0.22 | 0.09 | 0.05 | c0.24 | 0.04 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.97 | 1.10 | 0.08 | 1.00 | 1.19 | 0.11 | 0.68 | 0.35 | 0.90 | 0.66 | 0.38 | 0.47 |
| Uniform Delay, d1 | 85.7 | 85.0 | 80.9 | 86.0 | 85.0 | 81.6 | 85.0 | 15.9 | 85.1 | 85.2 | 16.6 | 81.5 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.89 | 1.26 | 1.24 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 41.1 | 75.1 | 0.3 | 50.7 | 108.3 | 0.4 | 6.1 | 0.2 | 43.9 | 5.8 | 0.3 | 2.3 |
| Delay (s) | 126.9 | 160.1 | 81.1 | 136.7 | 193.3 | 82.0 | 81.7 | 20.3 | 149.4 | 91.0 | 16.9 | 83.8 |
| Level of Service | F | F | F | F | F | F | F | C | F | F | B | F |
| Approach Delay (s) | | 135.7 | | | 154.6 | | | 45.3 | | | 28.7 | |
| Approach LOS | | F | | | F | | | D | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 72.2 | HCM Level of Service | E |
| HCM Volume to Capacity ratio | 0.56 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 65.2% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 1.00 | | 1.00 | 0.97 | 0.86 | | 1.00 | 0.86 | 1.00 |
| Frt | 1.00 | | 0.85 | 1.00 | | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 6403 | | 1770 | 6408 | 1583 |
| Flt Permitted | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 6403 | | 1770 | 6408 | 1583 |
| Volume (vph) | 326 | 0 | 187 | 14 | 0 | 6 | 136 | 1540 | 8 | 9 | 1906 | 206 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 326 | 0 | 187 | 14 | 0 | 6 | 136 | 1540 | 8 | 9 | 1906 | 206 |
| RTOR Reduction (vph) | 0 | 0 | 175 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 27 |
| Lane Group Flow (vph) | 326 | 0 | 12 | 14 | 0 | 0 | 136 | 1548 | 0 | 9 | 1906 | 179 |
| Turn Type | custom | | Over | custom | | Over | Prot | | | Prot | | Perm |
| Protected Phases | | | 5 | | | 1 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 6 |
| Actuated Green, G (s) | 21.4 | | 12.1 | 21.4 | | 3.0 | 12.1 | 153.6 | | 3.0 | 144.5 | 144.5 |
| Effective Green, g (s) | 21.4 | | 12.1 | 21.4 | | 3.0 | 12.1 | 153.6 | | 3.0 | 144.5 | 144.5 |
| Actuated g/C Ratio | 0.11 | | 0.06 | 0.11 | | 0.02 | 0.06 | 0.81 | | 0.02 | 0.76 | 0.76 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 387 | | 101 | 199 | | 25 | 219 | 5176 | | 28 | 4873 | 1204 |
| v/s Ratio Prot | | | 0.01 | | | 0.00 | c0.04 | 0.24 | | 0.01 | c0.30 | |
| v/s Ratio Perm | c0.09 | | | 0.01 | | | | | | | | 0.11 |
| v/c Ratio | 0.84 | | 0.12 | 0.07 | | 0.00 | 0.62 | 0.30 | | 0.32 | 0.39 | 0.15 |
| Uniform Delay, d1 | 82.6 | | 83.9 | 75.4 | | 92.0 | 86.7 | 4.6 | | 92.5 | 7.8 | 6.1 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.02 | 0.90 | 0.78 |
| Incremental Delay, d2 | 15.2 | | 0.5 | 0.2 | | 0.1 | 5.4 | 0.1 | | 5.9 | 0.2 | 0.2 |
| Delay (s) | 97.9 | | 84.4 | 75.6 | | 92.1 | 92.1 | 4.7 | | 100.5 | 7.2 | 5.0 |
| Level of Service | F | | F | E | | F | F | A | | F | A | A |
| Approach Delay (s) | | 93.0 | | | 80.5 | | | 11.8 | | | 7.4 | |
| Approach LOS | | F | | | F | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 19.6 | HCM Level of Service | B |
| HCM Volume to Capacity ratio | 0.46 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 52.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Volume (veh/h) | 38 | 60 | 199 | 22 | 22 | 183 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 38 | 60 | 199 | 22 | 22 | 183 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | 692 |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 437 | 210 | | | 221 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 437 | 210 | | | 221 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 93 | 93 | | | 98 | |
| cM capacity (veh/h) | 567 | 830 | | | 1348 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 98 | 221 | 22 | 183 |
| Volume Left | 38 | 0 | 22 | 0 |
| Volume Right | 60 | 22 | 0 | 0 |
| cSH | 704 | 1700 | 1348 | 1700 |
| Volume to Capacity | 0.14 | 0.13 | 0.02 | 0.11 |
| Queue Length 95th (ft) | 12 | 0 | 1 | 0 |
| Control Delay (s) | 10.9 | 0.0 | 7.7 | 0.0 |
| Lane LOS | B | | A | |
| Approach Delay (s) | 10.9 | 0.0 | 0.8 | |
| Approach LOS | B | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.4 | | |
| Intersection Capacity Utilization | 30.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 13 | 38 | 9 | 0 | 59 | 6 | 7 | 17 | 0 | 19 | 21 | 8 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 13 | 38 | 9 | 0 | 59 | 6 | 7 | 17 | 0 | 19 | 21 | 8 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 60 | 65 | 24 | 48 |
| Volume Left (vph) | 13 | 0 | 7 | 19 |
| Volume Right (vph) | 9 | 6 | 0 | 8 |
| Hadj (s) | -0.01 | -0.02 | 0.09 | 0.01 |
| Departure Headway (s) | 4.1 | 4.1 | 4.3 | 4.2 |
| Degree Utilization, x | 0.07 | 0.07 | 0.03 | 0.06 |
| Capacity (veh/h) | 853 | 857 | 800 | 827 |
| Control Delay (s) | 7.4 | 7.4 | 7.4 | 7.5 |
| Approach Delay (s) | 7.4 | 7.4 | 7.4 | 7.5 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.4 | | |
| HCM Level of Service | A | | |
| Intersection Capacity Utilization | 20.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.97 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 3433 | 3426 | | 3433 | 3539 | 1583 | 3433 | 5011 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 3433 | 3426 | | 3433 | 3539 | 1583 | 3433 | 5011 | |
| Volume (vph) | 118 | 409 | 163 | 251 | 416 | 113 | 188 | 539 | 150 | 84 | 677 | 73 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 118 | 409 | 163 | 251 | 416 | 113 | 188 | 539 | 150 | 84 | 677 | 73 |
| RTOR Reduction (vph) | 0 | 0 | 147 | 0 | 22 | 0 | 0 | 0 | 140 | 0 | 10 | 0 |
| Lane Group Flow (vph) | 118 | 409 | 16 | 251 | 507 | 0 | 188 | 539 | 10 | 84 | 740 | 0 |
| Turn Type | Prot | | Over | Prot | | | Prot | | Over | Prot | | |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 12.4 | 26.5 | 11.1 | 7.0 | 21.1 | | 11.1 | 53.7 | 7.0 | 6.8 | 49.4 | |
| Effective Green, g (s) | 12.4 | 26.5 | 11.1 | 7.0 | 21.1 | | 11.1 | 53.7 | 7.0 | 6.8 | 49.4 | |
| Actuated g/C Ratio | 0.11 | 0.24 | 0.10 | 0.06 | 0.19 | | 0.10 | 0.49 | 0.06 | 0.06 | 0.45 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 200 | 853 | 160 | 218 | 657 | | 346 | 1728 | 101 | 212 | 2250 | |
| v/s Ratio Prot | c0.07 | 0.12 | 0.01 | c0.07 | c0.15 | | c0.05 | 0.15 | 0.01 | 0.02 | c0.15 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.59 | 0.48 | 0.10 | 1.15 | 0.77 | | 0.54 | 0.31 | 0.09 | 0.40 | 0.33 | |
| Uniform Delay, d1 | 46.4 | 35.8 | 44.9 | 51.5 | 42.2 | | 47.0 | 17.0 | 48.5 | 49.6 | 19.6 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 4.6 | 0.4 | 0.3 | 107.8 | 5.6 | | 1.7 | 0.5 | 0.4 | 1.2 | 0.4 | |
| Delay (s) | 51.0 | 36.3 | 45.2 | 159.3 | 47.8 | | 48.8 | 17.5 | 48.9 | 50.8 | 20.0 | |
| Level of Service | D | D | D | F | D | | D | B | D | D | B | |
| Approach Delay (s) | | 40.9 | | | 83.7 | | | 29.6 | | | 23.1 | |
| Approach LOS | | D | | | F | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 43.6 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.52 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 55.7% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Volume (veh/h) | 22 | 597 | 700 | 9 | 8 | 13 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 22 | 597 | 700 | 9 | 8 | 13 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | 516 | | | |
| pX, platoon unblocked | 0.90 | | | | 0.90 | 0.90 |
| vC, conflicting volume | 709 | | | | 1042 | 350 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 569 | | | | 939 | 172 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 98 | | | | 97 | 98 |
| cM capacity (veh/h) | 902 | | | | 231 | 760 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | SB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 22 | 298 | 298 | 350 | 350 | 9 | 21 |
| Volume Left | 22 | 0 | 0 | 0 | 0 | 0 | 8 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 9 | 13 |
| cSH | 902 | 1700 | 1700 | 1700 | 1700 | 1700 | 406 |
| Volume to Capacity | 0.02 | 0.18 | 0.18 | 0.21 | 0.21 | 0.01 | 0.05 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| Control Delay (s) | 9.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 14.3 |
| Lane LOS | A | | | | | | B |
| Approach Delay (s) | 0.3 | | | 0.0 | | | 14.3 |
| Approach LOS | | | | | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 29.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 21 | 631 | 0 | 0 | 730 | 10 | 0 | 0 | 12 | 1 | 0 | 14 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 21 | 631 | 0 | 0 | 730 | 10 | 0 | 0 | 12 | 1 | 0 | 14 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 561 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.92 | | | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | |
| vC, conflicting volume | 740 | | | 631 | | | 1052 | 1413 | 316 | 1100 | 1403 | 365 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 740 | | | 506 | | | 966 | 1359 | 162 | 1017 | 1349 | 365 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 100 | | | 100 | 100 | 98 | 99 | 100 | 98 |
| cM capacity (veh/h) | 862 | | | 967 | | | 184 | 132 | 783 | 170 | 134 | 632 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 21 | 316 | 316 | 365 | 365 | 10 | 12 | 15 |
| Volume Left | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 10 | 12 | 14 |
| cSH | 862 | 1700 | 1700 | 1700 | 1700 | 1700 | 783 | 535 |
| Volume to Capacity | 0.02 | 0.19 | 0.19 | 0.21 | 0.21 | 0.01 | 0.02 | 0.03 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| Control Delay (s) | 9.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 9.7 | 11.9 |
| Lane LOS | A | | | | | | A | B |
| Approach Delay (s) | 0.3 | | | 0.0 | | | 9.7 | 11.9 |
| Approach LOS | | | | | | | A | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.3 | | |
| Intersection Capacity Utilization | 34.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.95 | | 1.00 | 0.96 | | 1.00 | 0.95 | | 1.00 | 0.97 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3353 | | 1770 | 3392 | | 1770 | 1763 | | 1770 | 1804 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3353 | | 1770 | 3392 | | 1770 | 1763 | | 1770 | 1804 | |
| Volume (vph) | 53 | 109 | 59 | 43 | 89 | 34 | 73 | 131 | 73 | 72 | 158 | 42 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 53 | 109 | 59 | 43 | 89 | 34 | 73 | 131 | 73 | 72 | 158 | 42 |
| RTOR Reduction (vph) | 0 | 52 | 0 | 0 | 30 | 0 | 0 | 12 | 0 | 0 | 6 | 0 |
| Lane Group Flow (vph) | 53 | 116 | 0 | 43 | 93 | 0 | 73 | 192 | 0 | 72 | 194 | 0 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 5.0 | 8.9 | | 4.7 | 8.6 | | 5.6 | 39.4 | | 5.6 | 39.4 | |
| Effective Green, g (s) | 5.0 | 8.9 | | 4.7 | 8.6 | | 5.6 | 39.4 | | 5.6 | 39.4 | |
| Actuated g/C Ratio | 0.07 | 0.12 | | 0.06 | 0.12 | | 0.08 | 0.53 | | 0.08 | 0.53 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 119 | 400 | | 112 | 391 | | 133 | 931 | | 133 | 953 | |
| v/s Ratio Prot | c0.03 | c0.03 | | 0.02 | 0.03 | | c0.04 | c0.11 | | 0.04 | 0.11 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.45 | 0.29 | | 0.38 | 0.24 | | 0.55 | 0.21 | | 0.54 | 0.20 | |
| Uniform Delay, d1 | 33.5 | 30.0 | | 33.6 | 30.0 | | 33.3 | 9.3 | | 33.3 | 9.3 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 2.6 | 0.4 | | 2.2 | 0.3 | | 4.6 | 0.5 | | 4.4 | 0.5 | |
| Delay (s) | 36.1 | 30.4 | | 35.7 | 30.3 | | 37.9 | 9.8 | | 37.7 | 9.8 | |
| Level of Service | D | C | | D | C | | D | A | | D | A | |
| Approach Delay (s) | | 31.7 | | | 31.7 | | | 17.2 | | | 17.2 | |
| Approach LOS | | C | | | C | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 23.2 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.26 | | |
| Actuated Cycle Length (s) | 74.6 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 44.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | | | 1.00 | 0.85 | | 0.97 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (prot) | 1770 | 3475 | | 1770 | 3522 | | | 1805 | 1583 | | 1790 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (perm) | 1770 | 3475 | | 1770 | 3522 | | | 1805 | 1583 | | 1790 | |
| Volume (vph) | 17 | 637 | 88 | 84 | 602 | 20 | 83 | 47 | 85 | 25 | 48 | 17 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 17 | 637 | 88 | 84 | 602 | 20 | 83 | 47 | 85 | 25 | 48 | 17 |
| RTOR Reduction (vph) | 0 | 9 | 0 | 0 | 2 | 0 | 0 | 0 | 77 | 0 | 9 | 0 |
| Lane Group Flow (vph) | 17 | 716 | 0 | 84 | 620 | 0 | 0 | 130 | 8 | 0 | 81 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | Over | Split | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 2.6 | 22.8 | | 7.4 | 27.6 | | | 27.0 | 7.4 | | 8.0 | |
| Effective Green, g (s) | 2.6 | 22.8 | | 7.4 | 27.6 | | | 27.0 | 7.4 | | 8.0 | |
| Actuated g/C Ratio | 0.03 | 0.28 | | 0.09 | 0.34 | | | 0.33 | 0.09 | | 0.10 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 57 | 976 | | 161 | 1197 | | | 600 | 144 | | 176 | |
| v/s Ratio Prot | 0.01 | c0.21 | | c0.05 | 0.18 | | | c0.07 | 0.00 | | c0.05 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.30 | 0.73 | | 0.52 | 0.52 | | | 0.22 | 0.05 | | 0.46 | |
| Uniform Delay, d1 | 38.4 | 26.4 | | 35.2 | 21.5 | | | 19.5 | 33.7 | | 34.6 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 2.9 | 2.9 | | 3.0 | 0.4 | | | 0.8 | 0.2 | | 1.9 | |
| Delay (s) | 41.3 | 29.3 | | 38.2 | 21.9 | | | 20.3 | 33.9 | | 36.5 | |
| Level of Service | D | C | | D | C | | | C | C | | D | |
| Approach Delay (s) | | 29.6 | | | 23.8 | | | 25.7 | | | 36.5 | |
| Approach LOS | | C | | | C | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 27.1 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.46 | | |
| Actuated Cycle Length (s) | 81.2 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 50.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 17 | 759 | 22 | 9 | 740 | 14 | 1 | 0 | 14 | 7 | 0 | 17 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 17 | 759 | 22 | 9 | 740 | 14 | 1 | 0 | 14 | 7 | 0 | 17 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 824 | | | 792 | | | | | | | |
| pX, platoon unblocked | 0.87 | | | 0.87 | | | 0.93 | 0.93 | 0.87 | 0.93 | 0.93 | 0.87 |
| vC, conflicting volume | 754 | | | 781 | | | 1209 | 1576 | 390 | 1192 | 1580 | 377 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 568 | | | 596 | | | 736 | 1129 | 147 | 718 | 1133 | 135 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 99 | | | 100 | 100 | 98 | 98 | 100 | 98 |
| cM capacity (veh/h) | 870 | | | 848 | | | 274 | 183 | 759 | 283 | 182 | 773 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 17 | 506 | 275 | 9 | 493 | 261 | 15 | 24 |
| Volume Left | 17 | 0 | 0 | 9 | 0 | 0 | 1 | 7 |
| Volume Right | 0 | 0 | 22 | 0 | 0 | 14 | 14 | 17 |
| cSH | 870 | 1700 | 1700 | 848 | 1700 | 1700 | 679 | 514 |
| Volume to Capacity | 0.02 | 0.30 | 0.16 | 0.01 | 0.29 | 0.15 | 0.02 | 0.05 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 4 |
| Control Delay (s) | 9.2 | 0.0 | 0.0 | 9.3 | 0.0 | 0.0 | 10.4 | 12.3 |
| Lane LOS | A | | | A | | | B | B |
| Approach Delay (s) | 0.2 | | | 0.1 | | | 10.4 | 12.3 |
| Approach LOS | | | | | | | B | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 32.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 0.95 | | 0.88 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (prot) | 3539 | 1583 | 1770 | 3539 | | 2787 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (perm) | 3539 | 1583 | 1770 | 3539 | | 2787 |
| Volume (vph) | 772 | 46 | 132 | 806 | 0 | 334 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 772 | 46 | 132 | 806 | 0 | 334 |
| RTOR Reduction (vph) | 0 | 12 | 0 | 0 | 0 | 184 |
| Lane Group Flow (vph) | 772 | 34 | 132 | 806 | 0 | 150 |
| Turn Type | | custom | Prot | | | custom |
| Protected Phases | 4 | 2 | 3 | 8 | | 2 |
| Permitted Phases | | 4 | | | | |
| Actuated Green, G (s) | 23.2 | 59.5 | 9.4 | 36.6 | | 36.3 |
| Effective Green, g (s) | 23.2 | 59.5 | 9.4 | 36.6 | | 36.3 |
| Actuated g/C Ratio | 0.29 | 0.74 | 0.12 | 0.45 | | 0.45 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 1015 | 1243 | 206 | 1601 | | 1251 |
| v/s Ratio Prot | c0.22 | 0.01 | c0.07 | 0.23 | | c0.05 |
| v/s Ratio Perm | | 0.01 | | | | |
| v/c Ratio | 0.76 | 0.03 | 0.64 | 0.50 | | 0.12 |
| Uniform Delay, d1 | 26.3 | 2.9 | 34.1 | 15.7 | | 13.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 3.4 | 0.0 | 6.6 | 0.3 | | 0.2 |
| Delay (s) | 29.7 | 2.9 | 40.8 | 16.0 | | 13.2 |
| Level of Service | C | A | D | B | | B |
| Approach Delay (s) | 28.2 | | | 19.5 | 13.2 | |
| Approach LOS | C | | | B | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 21.9 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.41 | | |
| Actuated Cycle Length (s) | 80.9 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 39.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.86 | 1.00 | 0.97 | 0.86 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 6408 | 1583 | 3433 | 6408 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 6408 | 1583 | 3433 | 6408 | 1583 |
| Volume (vph) | 401 | 541 | 192 | 331 | 537 | 166 | 230 | 1508 | 262 | 246 | 1918 | 292 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 401 | 541 | 192 | 331 | 537 | 166 | 230 | 1508 | 262 | 246 | 1918 | 292 |
| RTOR Reduction (vph) | 0 | 0 | 139 | 0 | 0 | 123 | 0 | 0 | 125 | 0 | 0 | 109 |
| Lane Group Flow (vph) | 401 | 541 | 53 | 331 | 537 | 43 | 230 | 1508 | 137 | 246 | 1918 | 183 |
| Turn Type | Prot | | Over | Prot | | Over | Prot | | Over | Prot | | Over |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 18.0 | 20.0 | 16.8 | 18.0 | 20.0 | 17.0 | 16.8 | 119.0 | 18.0 | 17.0 | 119.2 | 18.0 |
| Effective Green, g (s) | 18.0 | 20.0 | 16.8 | 18.0 | 20.0 | 17.0 | 16.8 | 119.0 | 18.0 | 17.0 | 119.2 | 18.0 |
| Actuated g/C Ratio | 0.09 | 0.11 | 0.09 | 0.09 | 0.11 | 0.09 | 0.09 | 0.63 | 0.09 | 0.09 | 0.63 | 0.09 |
| Clearance 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 |
| 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 | 3.0 |
| Lane Grp Cap (vph) | 325 | 373 | 140 | 325 | 373 | 142 | 304 | 4013 | 150 | 307 | 4020 | 150 |
| v/s Ratio Prot | c0.12 | c0.15 | 0.03 | 0.10 | 0.15 | 0.03 | 0.07 | 0.24 | 0.09 | c0.07 | c0.30 | 0.12 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 1.23 | 1.45 | 0.38 | 1.02 | 1.44 | 0.30 | 0.76 | 0.38 | 0.91 | 0.80 | 0.48 | 1.22 |
| Uniform Delay, d1 | 86.0 | 85.0 | 81.7 | 86.0 | 85.0 | 81.0 | 84.6 | 17.3 | 85.2 | 84.8 | 18.8 | 86.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.94 | 1.17 | 1.20 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 129.1 | 217.2 | 1.7 | 54.7 | 212.6 | 1.2 | 9.5 | 0.2 | 45.9 | 13.9 | 0.4 | 145.5 |
| Delay (s) | 215.1 | 302.2 | 83.3 | 140.7 | 297.6 | 82.2 | 89.2 | 20.5 | 148.5 | 98.8 | 19.2 | 231.5 |
| Level of Service | F | F | F | F | F | F | F | C | F | F | B | F |
| Approach Delay (s) | | 234.3 | | | 212.8 | | | 45.1 | | | 52.4 | |
| Approach LOS | | F | | | F | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 106.4 | HCM Level of Service | F |
| HCM Volume to Capacity ratio | 0.68 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 75.7% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 1.00 | | 1.00 | 0.97 | 0.86 | | 1.00 | 0.86 | 1.00 |
| Frt | 1.00 | | 0.85 | 1.00 | | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 6398 | | 1770 | 6408 | 1583 |
| Flt Permitted | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 6398 | | 1770 | 6408 | 1583 |
| Volume (vph) | 350 | 0 | 278 | 8 | 0 | 20 | 192 | 1683 | 18 | 20 | 2230 | 252 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 350 | 0 | 278 | 8 | 0 | 20 | 192 | 1683 | 18 | 20 | 2230 | 252 |
| RTOR Reduction (vph) | 0 | 0 | 256 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 31 |
| Lane Group Flow (vph) | 350 | 0 | 22 | 8 | 0 | 1 | 192 | 1701 | 0 | 20 | 2230 | 221 |
| Turn Type | custom | | Over | custom | | Over | Prot | | | Prot | | Perm |
| Protected Phases | | | 5 | | | 1 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 6 |
| Actuated Green, G (s) | 22.6 | | 15.1 | 22.6 | | 6.4 | 15.1 | 149.0 | | 6.4 | 140.3 | 140.3 |
| Effective Green, g (s) | 22.6 | | 15.1 | 22.6 | | 6.4 | 15.1 | 149.0 | | 6.4 | 140.3 | 140.3 |
| Actuated g/C Ratio | 0.12 | | 0.08 | 0.12 | | 0.03 | 0.08 | 0.78 | | 0.03 | 0.74 | 0.74 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 408 | | 126 | 211 | | 53 | 273 | 5017 | | 60 | 4732 | 1169 |
| v/s Ratio Prot | | | 0.01 | | | 0.00 | c0.06 | 0.27 | | 0.01 | c0.35 | |
| v/s Ratio Perm | c0.10 | | | 0.00 | | | | | | | | 0.14 |
| v/c Ratio | 0.86 | | 0.18 | 0.04 | | 0.01 | 0.70 | 0.34 | | 0.33 | 0.47 | 0.19 |
| Uniform Delay, d1 | 82.1 | | 81.6 | 74.1 | | 88.7 | 85.3 | 6.0 | | 89.7 | 10.0 | 7.6 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 0.96 | 0.80 | 0.77 |
| Incremental Delay, d2 | 16.2 | | 0.7 | 0.1 | | 0.1 | 8.0 | 0.2 | | 2.8 | 0.3 | 0.3 |
| Delay (s) | 98.3 | | 82.3 | 74.2 | | 88.8 | 93.2 | 6.2 | | 88.9 | 8.3 | 6.1 |
| Level of Service | F | | F | E | | F | F | A | | F | A | A |
| Approach Delay (s) | | 91.2 | | | 84.6 | | | 15.0 | | | 8.7 | |
| Approach LOS | | F | | | F | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 21.8 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.54 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 62.9% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Volume (veh/h) | 41 | 37 | 145 | 27 | 30 | 239 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 41 | 37 | 145 | 27 | 30 | 239 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | 692 |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 458 | 158 | | | 172 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 458 | 158 | | | 172 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 93 | 96 | | | 98 | |
| cM capacity (veh/h) | 549 | 887 | | | 1405 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 78 | 172 | 30 | 239 |
| Volume Left | 41 | 0 | 30 | 0 |
| Volume Right | 37 | 27 | 0 | 0 |
| cSH | 670 | 1700 | 1405 | 1700 |
| Volume to Capacity | 0.12 | 0.10 | 0.02 | 0.14 |
| Queue Length 95th (ft) | 10 | 0 | 2 | 0 |
| Control Delay (s) | 11.1 | 0.0 | 7.6 | 0.0 |
| Lane LOS | B | | A | |
| Approach Delay (s) | 11.1 | 0.0 | 0.8 | |
| Approach LOS | B | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.1 | | |
| Intersection Capacity Utilization | 27.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 8 | 31 | 3 | 1 | 49 | 0 | 4 | 4 | 0 | 20 | 6 | 2 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 8 | 31 | 3 | 1 | 49 | 0 | 4 | 4 | 0 | 20 | 6 | 2 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 42 | 50 | 8 | 28 |
| Volume Left (vph) | 8 | 1 | 4 | 20 |
| Volume Right (vph) | 3 | 0 | 0 | 2 |
| Hadj (s) | 0.03 | 0.04 | 0.13 | 0.13 |
| Departure Headway (s) | 4.1 | 4.1 | 4.3 | 4.2 |
| Degree Utilization, x | 0.05 | 0.06 | 0.01 | 0.03 |
| Capacity (veh/h) | 871 | 873 | 815 | 827 |
| Control Delay (s) | 7.3 | 7.3 | 7.3 | 7.4 |
| Approach Delay (s) | 7.3 | 7.3 | 7.3 | 7.4 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.3 | | |
| HCM Level of Service | A | | |
| Intersection Capacity Utilization | 16.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 3433 | 3464 | | 3433 | 3539 | 1583 | 3433 | 5009 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 3433 | 3464 | | 3433 | 3539 | 1583 | 3433 | 5009 | |
| Volume (vph) | 115 | 516 | 282 | 225 | 494 | 82 | 238 | 589 | 171 | 110 | 760 | 84 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 115 | 516 | 282 | 225 | 494 | 82 | 238 | 589 | 171 | 110 | 760 | 84 |
| RTOR Reduction (vph) | 0 | 0 | 248 | 0 | 12 | 0 | 0 | 0 | 160 | 0 | 11 | 0 |
| Lane Group Flow (vph) | 115 | 516 | 34 | 225 | 564 | 0 | 238 | 589 | 11 | 110 | 833 | 0 |
| Turn Type | Prot | | Over | Prot | | | Prot | | Over | Prot | | |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 12.2 | 28.5 | 13.1 | 7.0 | 23.3 | | 13.1 | 49.6 | 7.0 | 8.9 | 45.4 | |
| Effective Green, g (s) | 12.2 | 28.5 | 13.1 | 7.0 | 23.3 | | 13.1 | 49.6 | 7.0 | 8.9 | 45.4 | |
| Actuated g/C Ratio | 0.11 | 0.26 | 0.12 | 0.06 | 0.21 | | 0.12 | 0.45 | 0.06 | 0.08 | 0.41 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 196 | 917 | 189 | 218 | 734 | | 409 | 1596 | 101 | 278 | 2067 | |
| v/s Ratio Prot | c0.06 | 0.15 | 0.02 | c0.07 | c0.16 | | c0.07 | 0.17 | 0.01 | 0.03 | c0.17 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.59 | 0.56 | 0.18 | 1.03 | 0.77 | | 0.58 | 0.37 | 0.11 | 0.40 | 0.40 | |
| Uniform Delay, d1 | 46.5 | 35.3 | 43.6 | 51.5 | 40.8 | | 45.9 | 19.9 | 48.6 | 48.0 | 22.8 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 4.4 | 0.8 | 0.5 | 69.6 | 4.9 | | 2.1 | 0.7 | 0.5 | 0.9 | 0.6 | |
| Delay (s) | 50.9 | 36.1 | 44.1 | 121.1 | 45.7 | | 48.0 | 20.6 | 49.0 | 48.9 | 23.3 | |
| Level of Service | D | D | D | F | D | | D | C | D | D | C | |
| Approach Delay (s) | | 40.4 | | | 66.8 | | | 32.0 | | | 26.3 | |
| Approach LOS | | D | | | E | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 40.2 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.57 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 59.3% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Volume (veh/h) | 15 | 680 | 730 | 22 | 13 | 11 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 15 | 680 | 730 | 22 | 13 | 11 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | 516 | | | |
| pX, platoon unblocked | 0.88 | | | | 0.88 | 0.88 |
| vC, conflicting volume | 752 | | | | 1100 | 365 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 579 | | | | 975 | 138 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 98 | | | | 94 | 99 |
| cM capacity (veh/h) | 870 | | | | 215 | 777 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | SB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 15 | 340 | 340 | 365 | 365 | 22 | 24 |
| Volume Left | 15 | 0 | 0 | 0 | 0 | 0 | 13 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 22 | 11 |
| cSH | 870 | 1700 | 1700 | 1700 | 1700 | 1700 | 321 |
| Volume to Capacity | 0.02 | 0.20 | 0.20 | 0.21 | 0.21 | 0.01 | 0.07 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 0 | 0 | 6 |
| Control Delay (s) | 9.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 17.1 |
| Lane LOS | A | | | | | | C |
| Approach Delay (s) | 0.2 | | | 0.0 | | | 17.1 |
| Approach LOS | | | | | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 30.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 30 | 681 | 0 | 0 | 743 | 10 | 0 | 0 | 4 | 3 | 0 | 16 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 30 | 681 | 0 | 0 | 743 | 10 | 0 | 0 | 4 | 3 | 0 | 16 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 561 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.90 | | | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | |
| vC, conflicting volume | 753 | | | 681 | | | 1128 | 1494 | 340 | 1148 | 1484 | 372 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 753 | | | 537 | | | 1033 | 1439 | 159 | 1054 | 1427 | 372 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 96 | | | 100 | | | 100 | 100 | 99 | 98 | 100 | 97 |
| cM capacity (veh/h) | 853 | | | 926 | | | 160 | 115 | 774 | 157 | 116 | 626 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 30 | 340 | 340 | 372 | 372 | 10 | 4 | 19 |
| Volume Left | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 10 | 4 | 16 |
| cSH | 853 | 1700 | 1700 | 1700 | 1700 | 1700 | 774 | 426 |
| Volume to Capacity | 0.04 | 0.20 | 0.20 | 0.22 | 0.22 | 0.01 | 0.01 | 0.04 |
| Queue Length 95th (ft) | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Control Delay (s) | 9.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 9.7 | 13.9 |
| Lane LOS | A | | | | | | A | B |
| Approach Delay (s) | 0.4 | | | 0.0 | | | 9.7 | 13.9 |
| Approach LOS | | | | | | | A | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 35.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.97 | | 1.00 | 0.95 | | 1.00 | 0.91 | | 1.00 | 0.94 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3432 | | 1770 | 3376 | | 1770 | 1700 | | 1770 | 1750 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3432 | | 1770 | 3376 | | 1770 | 1700 | | 1770 | 1750 | |
| Volume (vph) | 40 | 126 | 32 | 87 | 106 | 47 | 38 | 77 | 107 | 58 | 116 | 79 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 40 | 126 | 32 | 87 | 106 | 47 | 38 | 77 | 107 | 58 | 116 | 79 |
| RTOR Reduction (vph) | 0 | 24 | 0 | 0 | 39 | 0 | 0 | 31 | 0 | 0 | 15 | 0 |
| Lane Group Flow (vph) | 40 | 134 | 0 | 87 | 114 | 0 | 38 | 153 | 0 | 58 | 180 | 0 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 4.7 | 9.4 | | 7.8 | 12.5 | | 4.7 | 38.0 | | 5.3 | 38.6 | |
| Effective Green, g (s) | 4.7 | 9.4 | | 7.8 | 12.5 | | 4.7 | 38.0 | | 5.3 | 38.6 | |
| Actuated g/C Ratio | 0.06 | 0.12 | | 0.10 | 0.16 | | 0.06 | 0.50 | | 0.07 | 0.50 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 109 | 422 | | 180 | 552 | | 109 | 844 | | 123 | 883 | |
| v/s Ratio Prot | 0.02 | c0.04 | | c0.05 | c0.03 | | 0.02 | 0.09 | | c0.03 | c0.10 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.37 | 0.32 | | 0.48 | 0.21 | | 0.35 | 0.18 | | 0.47 | 0.20 | |
| Uniform Delay, d1 | 34.5 | 30.6 | | 32.4 | 27.7 | | 34.4 | 10.6 | | 34.3 | 10.5 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 2.1 | 0.4 | | 2.0 | 0.2 | | 1.9 | 0.5 | | 2.8 | 0.5 | |
| Delay (s) | 36.6 | 31.1 | | 34.5 | 27.9 | | 36.4 | 11.1 | | 37.1 | 11.0 | |
| Level of Service | D | C | | C | C | | D | B | | D | B | |
| Approach Delay (s) | | 32.2 | | | 30.3 | | | 15.4 | | | 17.0 | |
| Approach LOS | | C | | | C | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 23.4 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.27 | | |
| Actuated Cycle Length (s) | 76.5 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 44.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | | | 1.00 | 0.85 | | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (prot) | 1770 | 3462 | | 1770 | 3529 | | | 1803 | 1583 | | 1763 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (perm) | 1770 | 3462 | | 1770 | 3529 | | | 1803 | 1583 | | 1763 | |
| Volume (vph) | 59 | 848 | 145 | 105 | 753 | 15 | 160 | 82 | 118 | 35 | 85 | 59 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 59 | 848 | 145 | 105 | 753 | 15 | 160 | 82 | 118 | 35 | 85 | 59 |
| RTOR Reduction (vph) | 0 | 11 | 0 | 0 | 1 | 0 | 0 | 0 | 104 | 0 | 18 | 0 |
| Lane Group Flow (vph) | 59 | 982 | 0 | 105 | 767 | 0 | 0 | 242 | 14 | 0 | 161 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | Over | Split | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 7.3 | 27.1 | | 10.8 | 30.6 | | | 25.1 | 10.8 | | 14.0 | |
| Effective Green, g (s) | 7.3 | 27.1 | | 10.8 | 30.6 | | | 25.1 | 10.8 | | 14.0 | |
| Actuated g/C Ratio | 0.08 | 0.29 | | 0.12 | 0.33 | | | 0.27 | 0.12 | | 0.15 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 139 | 1009 | | 206 | 1161 | | | 487 | 184 | | 265 | |
| v/s Ratio Prot | 0.03 | c0.28 | | c0.06 | c0.22 | | | c0.13 | 0.01 | | c0.09 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.42 | 0.97 | | 0.51 | 0.66 | | | 0.50 | 0.07 | | 0.61 | |
| Uniform Delay, d1 | 40.8 | 32.6 | | 38.6 | 26.7 | | | 28.6 | 36.6 | | 36.9 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 2.1 | 21.8 | | 2.0 | 1.4 | | | 3.6 | 0.2 | | 3.9 | |
| Delay (s) | 42.9 | 54.4 | | 40.6 | 28.2 | | | 32.2 | 36.8 | | 40.9 | |
| Level of Service | D | D | | D | C | | | C | D | | D | |
| Approach Delay (s) | | 53.8 | | | 29.7 | | | 33.7 | | | 40.9 | |
| Approach LOS | | D | | | C | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 41.4 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.72 | | |
| Actuated Cycle Length (s) | 93.0 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 70.4% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 62 | 1038 | 12 | 14 | 900 | 36 | 1 | 3 | 12 | 19 | 0 | 17 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 62 | 1038 | 12 | 14 | 900 | 36 | 1 | 3 | 12 | 19 | 0 | 17 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 824 | | | 792 | | | | | | | |
| pX, platoon unblocked | 0.82 | | | 0.78 | | | 0.87 | 0.87 | 0.78 | 0.87 | 0.87 | 0.82 |
| vC, conflicting volume | 936 | | | 1050 | | | 1663 | 2132 | 525 | 1602 | 2120 | 468 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 695 | | | 784 | | | 980 | 1517 | 112 | 911 | 1503 | 121 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 92 | | | 98 | | | 99 | 97 | 98 | 89 | 100 | 98 |
| cM capacity (veh/h) | 731 | | | 649 | | | 160 | 92 | 718 | 177 | 94 | 740 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 62 | 692 | 358 | 14 | 600 | 336 | 16 | 36 |
| Volume Left | 62 | 0 | 0 | 14 | 0 | 0 | 1 | 19 |
| Volume Right | 0 | 0 | 12 | 0 | 0 | 36 | 12 | 17 |
| cSH | 731 | 1700 | 1700 | 649 | 1700 | 1700 | 289 | 276 |
| Volume to Capacity | 0.08 | 0.41 | 0.21 | 0.02 | 0.35 | 0.20 | 0.06 | 0.13 |
| Queue Length 95th (ft) | 7 | 0 | 0 | 2 | 0 | 0 | 4 | 11 |
| Control Delay (s) | 10.4 | 0.0 | 0.0 | 10.7 | 0.0 | 0.0 | 18.2 | 20.0 |
| Lane LOS | B | | | B | | | C | C |
| Approach Delay (s) | 0.6 | | | 0.2 | | | 18.2 | 20.0 |
| Approach LOS | | | | | | | C | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.9 | | |
| Intersection Capacity Utilization | 51.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 0.95 | | 0.88 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (prot) | 3539 | 1583 | 1770 | 3539 | | 2787 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (perm) | 3539 | 1583 | 1770 | 3539 | | 2787 |
| Volume (vph) | 1050 | 24 | 80 | 1025 | 0 | 368 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 1050 | 24 | 80 | 1025 | 0 | 368 |
| RTOR Reduction (vph) | 0 | 13 | 0 | 0 | 0 | 216 |
| Lane Group Flow (vph) | 1050 | 11 | 80 | 1025 | 0 | 152 |
| Turn Type | | custom | Prot | | | custom |
| Protected Phases | 4 | 2 | 3 | 8 | | 2 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 31.1 | 35.9 | 7.8 | 42.9 | | 35.9 |
| Effective Green, g (s) | 31.1 | 35.9 | 7.8 | 42.9 | | 35.9 |
| Actuated g/C Ratio | 0.36 | 0.41 | 0.09 | 0.49 | | 0.41 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 1268 | 655 | 159 | 1749 | | 1153 |
| v/s Ratio Prot | c0.30 | 0.01 | 0.05 | c0.29 | | c0.05 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.83 | 0.02 | 0.50 | 0.59 | | 0.13 |
| Uniform Delay, d1 | 25.4 | 15.0 | 37.7 | 15.6 | | 15.8 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 4.6 | 0.0 | 2.5 | 0.5 | | 0.2 |
| Delay (s) | 30.0 | 15.1 | 40.1 | 16.1 | | 16.0 |
| Level of Service | C | B | D | B | | B |
| Approach Delay (s) | 29.7 | | | 17.9 | 16.0 | |
| Approach LOS | C | | | B | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 22.6 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.48 | | |
| Actuated Cycle Length (s) | 86.8 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 48.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | 1.00 | 0.97 | 0.91 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 5085 | 1583 | 3433 | 5085 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 5085 | 1583 | 3433 | 5085 | 1583 |
| Volume (vph) | 463 | 743 | 282 | 364 | 567 | 103 | 161 | 1594 | 339 | 265 | 3175 | 233 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor (vph) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 85% | 100% | 100% | 85% | 100% |
| Adj. Flow (vph) | 463 | 743 | 282 | 364 | 567 | 103 | 161 | 1355 | 339 | 265 | 2699 | 233 |
| RTOR Reduction (vph) | 0 | 0 | 129 | 0 | 0 | 73 | 0 | 0 | 142 | 0 | 0 | 49 |
| Lane Group Flow (vph) | 463 | 743 | 153 | 364 | 567 | 30 | 161 | 1355 | 197 | 265 | 2699 | 184 |
| Turn Type | Prot | | Over | Prot | | Over | Prot | | Over | Prot | | Over |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 18.0 | 20.0 | 18.0 | 18.0 | 20.0 | 17.4 | 18.0 | 118.6 | 18.0 | 17.4 | 118.0 | 18.0 |
| Effective Green, g (s) | 18.0 | 20.0 | 18.0 | 18.0 | 20.0 | 17.4 | 18.0 | 118.6 | 18.0 | 17.4 | 118.0 | 18.0 |
| Actuated g/C Ratio | 0.09 | 0.11 | 0.09 | 0.09 | 0.11 | 0.09 | 0.09 | 0.62 | 0.09 | 0.09 | 0.62 | 0.09 |
| Clearance 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 |
| 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 | 3.0 |
| Lane Grp Cap (vph) | 325 | 373 | 150 | 325 | 373 | 145 | 325 | 3174 | 150 | 314 | 3158 | 150 |
| v/s Ratio Prot | c0.13 | c0.21 | c0.10 | 0.11 | 0.16 | 0.02 | 0.05 | 0.27 | 0.12 | 0.08 | c0.53 | 0.12 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 1.42 | 1.99 | 1.02 | 1.12 | 1.52 | 0.21 | 0.50 | 0.43 | 1.31 | 0.84 | 0.85 | 1.23 |
| Uniform Delay, d1 | 86.0 | 85.0 | 86.0 | 86.0 | 85.0 | 79.9 | 81.7 | 18.3 | 86.0 | 85.0 | 29.1 | 86.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.04 | 1.28 | 1.26 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 208.1 | 455.9 | 79.7 | 86.3 | 247.4 | 0.7 | 1.1 | 0.4 | 176.4 | 18.3 | 3.2 | 147.3 |
| Delay (s) | 294.1 | 540.9 | 165.7 | 172.3 | 332.4 | 80.6 | 86.1 | 23.7 | 284.9 | 103.3 | 32.3 | 233.3 |
| Level of Service | F | F | F | F | F | F | F | C | F | F | C | F |
| Approach Delay (s) | | 393.0 | | | 251.0 | | | 76.9 | | | 52.8 | |
| Approach LOS | | F | | | F | | | E | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 152.6 | HCM Level of Service | F |
| HCM Volume to Capacity ratio | 1.06 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 143.4% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 1.00 | | 1.00 | 0.97 | 0.91 | | 1.00 | 0.91 | 1.00 |
| Frt | 1.00 | | 0.85 | 1.00 | | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 5081 | | 1770 | 5085 | 1583 |
| Flt Permitted | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 5081 | | 1770 | 5085 | 1583 |
| Volume (vph) | 451 | 0 | 214 | 8 | 0 | 9 | 75 | 1612 | 7 | 32 | 3552 | 109 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor (vph) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 85% | 100% | 100% | 85% | 100% |
| Adj. Flow (vph) | 451 | 0 | 214 | 8 | 0 | 9 | 75 | 1370 | 7 | 32 | 3019 | 109 |
| RTOR Reduction (vph) | 0 | 0 | 203 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 8 |
| Lane Group Flow (vph) | 451 | 0 | 11 | 8 | 0 | 0 | 75 | 1377 | 0 | 32 | 3019 | 101 |
| Turn Type | custom | | Over | custom | | Over | Prot | | | Prot | | Perm |
| Protected Phases | | | 5 | | | 1 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 6 |
| Actuated Green, G (s) | 28.0 | | 9.9 | 28.0 | | 7.5 | 9.9 | 142.5 | | 7.5 | 140.1 | 140.1 |
| Effective Green, g (s) | 28.0 | | 9.9 | 28.0 | | 7.5 | 9.9 | 142.5 | | 7.5 | 140.1 | 140.1 |
| Actuated g/C Ratio | 0.15 | | 0.05 | 0.15 | | 0.04 | 0.05 | 0.75 | | 0.04 | 0.74 | 0.74 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 506 | | 82 | 261 | | 62 | 179 | 3811 | | 70 | 3750 | 1167 |
| v/s Ratio Prot | | | 0.01 | | | 0.00 | c0.02 | 0.27 | | 0.02 | c0.59 | |
| v/s Ratio Perm | c0.13 | | | 0.00 | | | | | | | | 0.06 |
| v/c Ratio | 0.89 | | 0.14 | 0.03 | | 0.01 | 0.42 | 0.36 | | 0.46 | 0.81 | 0.09 |
| Uniform Delay, d1 | 79.5 | | 86.0 | 69.4 | | 87.7 | 87.3 | 8.1 | | 89.3 | 16.1 | 7.0 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 0.86 | 0.60 | 0.92 |
| Incremental Delay, d2 | 17.7 | | 0.8 | 0.0 | | 0.0 | 1.6 | 0.3 | | 2.0 | 0.8 | 0.1 |
| Delay (s) | 97.2 | | 86.7 | 69.4 | | 87.7 | 88.8 | 8.4 | | 78.4 | 10.5 | 6.5 |
| Level of Service | F | | F | E | | F | F | A | | E | B | A |
| Approach Delay (s) | | 93.8 | | | 79.1 | | | 12.6 | | | 11.0 | |
| Approach LOS | | F | | | E | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 22.1 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.80 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 84.9% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Volume (veh/h) | 92 | 74 | 254 | 14 | 11 | 432 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 92 | 74 | 254 | 14 | 11 | 432 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | 692 |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 715 | 261 | | | 268 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 715 | 261 | | | 268 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 77 | 90 | | | 99 | |
| cM capacity (veh/h) | 394 | 778 | | | 1296 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 166 | 268 | 11 | 432 |
| Volume Left | 92 | 0 | 11 | 0 |
| Volume Right | 74 | 14 | 0 | 0 |
| cSH | 505 | 1700 | 1296 | 1700 |
| Volume to Capacity | 0.33 | 0.16 | 0.01 | 0.25 |
| Queue Length 95th (ft) | 36 | 0 | 1 | 0 |
| Control Delay (s) | 15.6 | 0.0 | 7.8 | 0.0 |
| Lane LOS | C | | A | |
| Approach Delay (s) | 15.6 | 0.0 | 0.2 | |
| Approach LOS | C | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.0 | | |
| Intersection Capacity Utilization | 39.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 9 | 16 | 0 | 0 | 106 | 7 | 7 | 11 | 0 | 10 | 1 | 5 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 9 | 16 | 0 | 0 | 106 | 7 | 7 | 11 | 0 | 10 | 1 | 5 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 25 | 113 | 18 | 16 |
| Volume Left (vph) | 9 | 0 | 7 | 10 |
| Volume Right (vph) | 0 | 7 | 0 | 5 |
| Hadj (s) | 0.11 | 0.00 | 0.11 | -0.03 |
| Departure Headway (s) | 4.2 | 4.0 | 4.3 | 4.2 |
| Degree Utilization, x | 0.03 | 0.13 | 0.02 | 0.02 |
| Capacity (veh/h) | 842 | 888 | 797 | 828 |
| Control Delay (s) | 7.3 | 7.6 | 7.4 | 7.3 |
| Approach Delay (s) | 7.3 | 7.6 | 7.4 | 7.3 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.5 | | |
| HCM Level of Service | A | | |
| Intersection Capacity Utilization | 18.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 3433 | 3472 | | 3433 | 3539 | 1583 | 3433 | 5019 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 3433 | 3472 | | 3433 | 3539 | 1583 | 3433 | 5019 | |
| Volume (vph) | 152 | 719 | 314 | 348 | 729 | 105 | 309 | 610 | 181 | 170 | 1078 | 102 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 152 | 719 | 314 | 348 | 729 | 105 | 309 | 610 | 181 | 170 | 1078 | 102 |
| RTOR Reduction (vph) | 0 | 0 | 271 | 0 | 9 | 0 | 0 | 0 | 169 | 0 | 10 | 0 |
| Lane Group Flow (vph) | 152 | 719 | 43 | 348 | 825 | 0 | 309 | 610 | 12 | 170 | 1170 | 0 |
| Turn Type | Prot | | Over | Prot | | | Prot | | Over | Prot | | |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 14.4 | 32.0 | 15.1 | 7.0 | 24.6 | | 15.1 | 44.6 | 7.0 | 10.4 | 39.9 | |
| Effective Green, g (s) | 14.4 | 32.0 | 15.1 | 7.0 | 24.6 | | 15.1 | 44.6 | 7.0 | 10.4 | 39.9 | |
| Actuated g/C Ratio | 0.13 | 0.29 | 0.14 | 0.06 | 0.22 | | 0.14 | 0.41 | 0.06 | 0.09 | 0.36 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 232 | 1030 | 217 | 218 | 776 | | 471 | 1435 | 101 | 325 | 1821 | |
| v/s Ratio Prot | c0.09 | 0.20 | 0.03 | c0.10 | c0.24 | | c0.09 | 0.17 | 0.01 | 0.05 | c0.23 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.66 | 0.70 | 0.20 | 1.60 | 1.06 | | 0.66 | 0.43 | 0.11 | 0.52 | 0.64 | |
| Uniform Delay, d1 | 45.4 | 34.7 | 42.1 | 51.5 | 42.7 | | 45.0 | 23.5 | 48.6 | 47.4 | 29.1 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 6.5 | 2.1 | 0.5 | 288.9 | 50.3 | | 3.3 | 0.9 | 0.5 | 1.5 | 1.8 | |
| Delay (s) | 51.9 | 36.8 | 42.5 | 340.4 | 93.0 | | 48.3 | 24.4 | 49.1 | 49.0 | 30.9 | |
| Level of Service | D | D | D | F | F | | D | C | D | D | C | |
| Approach Delay (s) | | 40.3 | | | 165.8 | | | 35.2 | | | 33.2 | |
| Approach LOS | | D | | | F | | | D | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 67.9 | HCM Level of Service | E |
| HCM Volume to Capacity ratio | 0.82 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 77.2% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Volume (veh/h) | 50 | 1043 | 903 | 22 | 6 | 19 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 50 | 1043 | 903 | 22 | 6 | 19 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | 516 | | | |
| pX, platoon unblocked | 0.83 | | | | 0.83 | 0.83 |
| vC, conflicting volume | 925 | | | | 1524 | 452 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 704 | | | | 1427 | 133 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 93 | | | | 94 | 97 |
| cM capacity (veh/h) | 738 | | | | 98 | 740 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | SB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 50 | 522 | 522 | 452 | 452 | 22 | 25 |
| Volume Left | 50 | 0 | 0 | 0 | 0 | 0 | 6 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 22 | 19 |
| cSH | 738 | 1700 | 1700 | 1700 | 1700 | 1700 | 287 |
| Volume to Capacity | 0.07 | 0.31 | 0.31 | 0.27 | 0.27 | 0.01 | 0.09 |
| Queue Length 95th (ft) | 5 | 0 | 0 | 0 | 0 | 0 | 7 |
| Control Delay (s) | 10.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 18.8 |
| Lane LOS | B | | | | | | C |
| Approach Delay (s) | 0.5 | | | 0.0 | | | 18.8 |
| Approach LOS | | | | | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.5 | | |
| Intersection Capacity Utilization | 41.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 42 | 1033 | 0 | 0 | 955 | 14 | 0 | 0 | 34 | 3 | 0 | 34 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 42 | 1033 | 0 | 0 | 955 | 14 | 0 | 0 | 34 | 3 | 0 | 34 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 561 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.83 | | | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | |
| vC, conflicting volume | 969 | | | 1033 | | | 1628 | 2086 | 516 | 1590 | 2072 | 478 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 969 | | | 831 | | | 1551 | 2104 | 206 | 1504 | 2087 | 478 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 94 | | | 100 | | | 100 | 100 | 95 | 95 | 100 | 94 |
| cM capacity (veh/h) | 707 | | | 659 | | | 57 | 40 | 662 | 63 | 41 | 534 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 42 | 516 | 516 | 478 | 478 | 14 | 34 | 37 |
| Volume Left | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 14 | 34 | 34 |
| cSH | 707 | 1700 | 1700 | 1700 | 1700 | 1700 | 662 | 332 |
| Volume to Capacity | 0.06 | 0.30 | 0.30 | 0.28 | 0.28 | 0.01 | 0.05 | 0.11 |
| Queue Length 95th (ft) | 5 | 0 | 0 | 0 | 0 | 0 | 4 | 9 |
| Control Delay (s) | 10.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.7 | 17.2 |
| Lane LOS | B | | | | | | B | C |
| Approach Delay (s) | 0.4 | | | 0.0 | | | 10.7 | 17.2 |
| Approach LOS | | | | | | | B | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.7 | | |
| Intersection Capacity Utilization | 45.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.97 | | 1.00 | 0.96 | | 1.00 | 0.92 | | 1.00 | 0.95 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3419 | | 1770 | 3383 | | 1770 | 1707 | | 1770 | 1778 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3419 | | 1770 | 3383 | | 1770 | 1707 | | 1770 | 1778 | |
| Volume (vph) | 33 | 249 | 73 | 84 | 110 | 46 | 69 | 146 | 183 | 151 | 298 | 129 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 33 | 249 | 73 | 84 | 110 | 46 | 69 | 146 | 183 | 151 | 298 | 129 |
| RTOR Reduction (vph) | 0 | 26 | 0 | 0 | 37 | 0 | 0 | 32 | 0 | 0 | 12 | 0 |
| Lane Group Flow (vph) | 33 | 296 | 0 | 84 | 119 | 0 | 69 | 297 | 0 | 151 | 415 | 0 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 4.5 | 14.2 | | 8.0 | 17.7 | | 7.4 | 41.5 | | 10.8 | 44.9 | |
| Effective Green, g (s) | 4.5 | 14.2 | | 8.0 | 17.7 | | 7.4 | 41.5 | | 10.8 | 44.9 | |
| Actuated g/C Ratio | 0.05 | 0.16 | | 0.09 | 0.20 | | 0.08 | 0.46 | | 0.12 | 0.50 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 88 | 536 | | 156 | 662 | | 145 | 783 | | 211 | 882 | |
| v/s Ratio Prot | 0.02 | c0.09 | | c0.05 | c0.04 | | 0.04 | 0.17 | | c0.09 | c0.23 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.38 | 0.55 | | 0.54 | 0.18 | | 0.48 | 0.38 | | 0.72 | 0.47 | |
| Uniform Delay, d1 | 41.6 | 35.2 | | 39.5 | 30.3 | | 39.7 | 16.1 | | 38.4 | 15.0 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 2.7 | 1.2 | | 3.5 | 0.1 | | 2.5 | 1.4 | | 11.0 | 1.8 | |
| Delay (s) | 44.3 | 36.4 | | 43.0 | 30.5 | | 42.2 | 17.4 | | 49.3 | 16.8 | |
| Level of Service | D | D | | D | C | | D | B | | D | B | |
| Approach Delay (s) | | 37.2 | | | 34.9 | | | 21.7 | | | 25.3 | |
| Approach LOS | | D | | | C | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 28.5 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.55 | | |
| Actuated Cycle Length (s) | 90.5 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 57.8% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | | | 1.00 | 0.85 | | 0.95 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (prot) | 1770 | 3457 | | 1770 | 3531 | | | 1811 | 1583 | | 1748 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (perm) | 1770 | 3457 | | 1770 | 3531 | | | 1811 | 1583 | | 1748 | |
| Volume (vph) | 27 | 697 | 128 | 122 | 660 | 10 | 102 | 75 | 94 | 27 | 48 | 46 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 27 | 697 | 128 | 122 | 660 | 10 | 102 | 75 | 94 | 27 | 48 | 46 |
| RTOR Reduction (vph) | 0 | 12 | 0 | 0 | 1 | 0 | 0 | 0 | 84 | 0 | 23 | 0 |
| Lane Group Flow (vph) | 27 | 813 | 0 | 122 | 669 | 0 | 0 | 177 | 10 | 0 | 98 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | Over | Split | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 2.9 | 26.6 | | 9.2 | 32.9 | | | 26.4 | 9.2 | | 8.7 | |
| Effective Green, g (s) | 2.9 | 26.6 | | 9.2 | 32.9 | | | 26.4 | 9.2 | | 8.7 | |
| Actuated g/C Ratio | 0.03 | 0.31 | | 0.11 | 0.38 | | | 0.30 | 0.11 | | 0.10 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 59 | 1058 | | 187 | 1337 | | | 550 | 168 | | 175 | |
| v/s Ratio Prot | 0.02 | c0.24 | | c0.07 | 0.19 | | | c0.10 | 0.01 | | c0.06 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.46 | 0.77 | | 0.65 | 0.50 | | | 0.32 | 0.06 | | 0.56 | |
| Uniform Delay, d1 | 41.2 | 27.4 | | 37.3 | 20.7 | | | 23.3 | 35.0 | | 37.3 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 5.5 | 3.4 | | 7.9 | 0.3 | | | 1.5 | 0.1 | | 3.8 | |
| Delay (s) | 46.8 | 30.8 | | 45.2 | 21.0 | | | 24.9 | 35.1 | | 41.1 | |
| Level of Service | D | C | | D | C | | | C | D | | D | |
| Approach Delay (s) | | 31.3 | | | 24.7 | | | 28.4 | | | 41.1 | |
| Approach LOS | | C | | | C | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 28.9 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.56 | | |
| Actuated Cycle Length (s) | 86.9 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 56.4% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 35 | 783 | 46 | 35 | 795 | 30 | 1 | 0 | 5 | 21 | 1 | 25 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 35 | 783 | 46 | 35 | 795 | 30 | 1 | 0 | 5 | 21 | 1 | 25 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 824 | | | 792 | | | | | | | |
| pX, platoon unblocked | 0.86 | | | 0.85 | | | 0.92 | 0.92 | 0.85 | 0.92 | 0.92 | 0.86 |
| vC, conflicting volume | 825 | | | 829 | | | 1369 | 1771 | 414 | 1346 | 1779 | 412 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 635 | | | 621 | | | 859 | 1297 | 133 | 835 | 1306 | 156 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 96 | | | 96 | | | 100 | 100 | 99 | 91 | 99 | 97 |
| cM capacity (veh/h) | 813 | | | 812 | | | 206 | 135 | 757 | 222 | 134 | 742 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 35 | 522 | 307 | 35 | 530 | 295 | 6 | 47 |
| Volume Left | 35 | 0 | 0 | 35 | 0 | 0 | 1 | 21 |
| Volume Right | 0 | 0 | 46 | 0 | 0 | 30 | 5 | 25 |
| cSH | 813 | 1700 | 1700 | 812 | 1700 | 1700 | 524 | 346 |
| Volume to Capacity | 0.04 | 0.31 | 0.18 | 0.04 | 0.31 | 0.17 | 0.01 | 0.14 |
| Queue Length 95th (ft) | 3 | 0 | 0 | 3 | 0 | 0 | 1 | 12 |
| Control Delay (s) | 9.6 | 0.0 | 0.0 | 9.6 | 0.0 | 0.0 | 11.9 | 17.0 |
| Lane LOS | A | | | A | | | B | C |
| Approach Delay (s) | 0.4 | | | 0.4 | | | 11.9 | 17.0 |
| Approach LOS | | | | | | | B | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.9 | | |
| Intersection Capacity Utilization | 41.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 0.90 | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | 0.98 | 1.00 |
| Satd. Flow (prot) | 3539 | 1583 | 1770 | 3539 | 1649 | 1504 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | 0.98 | 1.00 |
| Satd. Flow (perm) | 3539 | 1583 | 1770 | 3539 | 1649 | 1504 |
| Volume (vph) | 745 | 92 | 190 | 873 | 17 | 79 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 745 | 92 | 190 | 873 | 17 | 79 |
| RTOR Reduction (vph) | 0 | 54 | 0 | 0 | 20 | 26 |
| Lane Group Flow (vph) | 745 | 38 | 190 | 873 | 31 | 19 |
| Turn Type | | Over | Prot | | | Prot |
| Protected Phases | 4 | 2 | 3 | 8 | 2 | 2 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 23.7 | 35.6 | 14.2 | 41.9 | 35.6 | 35.6 |
| Effective Green, g (s) | 23.7 | 35.6 | 14.2 | 41.9 | 35.6 | 35.6 |
| Actuated g/C Ratio | 0.28 | 0.42 | 0.17 | 0.49 | 0.42 | 0.42 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 981 | 659 | 294 | 1734 | 687 | 626 |
| v/s Ratio Prot | c0.21 | c0.02 | c0.11 | 0.25 | 0.02 | 0.01 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.76 | 0.06 | 0.65 | 0.50 | 0.05 | 0.03 |
| Uniform Delay, d1 | 28.3 | 14.9 | 33.3 | 14.8 | 14.8 | 14.7 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 3.4 | 0.2 | 4.8 | 0.2 | 0.1 | 0.1 |
| Delay (s) | 31.7 | 15.1 | 38.1 | 15.0 | 15.0 | 14.8 |
| Level of Service | C | B | D | B | B | B |
| Approach Delay (s) | 29.9 | | | 19.1 | 14.9 | |
| Approach LOS | C | | | B | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 23.4 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.40 | | |
| Actuated Cycle Length (s) | 85.5 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 49.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | 1.00 | 0.97 | 0.91 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 5085 | 1583 | 3433 | 5085 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 5085 | 1583 | 3433 | 5085 | 1583 |
| Volume (vph) | 311 | 364 | 113 | 322 | 602 | 227 | 171 | 2982 | 199 | 122 | 1425 | 200 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor (vph) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 85% | 100% | 100% | 85% | 100% |
| Adj. Flow (vph) | 311 | 364 | 113 | 322 | 602 | 227 | 171 | 2535 | 199 | 122 | 1211 | 200 |
| RTOR Reduction (vph) | 0 | 0 | 105 | 0 | 0 | 154 | 0 | 0 | 45 | 0 | 0 | 94 |
| Lane Group Flow (vph) | 311 | 364 | 8 | 322 | 602 | 73 | 171 | 2535 | 154 | 122 | 1211 | 106 |
| Turn Type | Prot | | Over | Prot | | Over | Prot | | Over | Prot | | Over |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 17.0 | 24.6 | 13.2 | 20.4 | 28.0 | 14.2 | 13.2 | 114.8 | 20.4 | 14.2 | 115.8 | 17.0 |
| Effective Green, g (s) | 17.0 | 24.6 | 13.2 | 20.4 | 28.0 | 14.2 | 13.2 | 114.8 | 20.4 | 14.2 | 115.8 | 17.0 |
| Actuated g/C Ratio | 0.09 | 0.13 | 0.07 | 0.11 | 0.15 | 0.07 | 0.07 | 0.60 | 0.11 | 0.07 | 0.61 | 0.09 |
| Clearance 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 |
| 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 | 3.0 |
| Lane Grp Cap (vph) | 307 | 458 | 110 | 369 | 522 | 118 | 239 | 3072 | 170 | 257 | 3099 | 142 |
| v/s Ratio Prot | c0.09 | 0.10 | 0.00 | 0.09 | c0.17 | 0.05 | c0.05 | c0.50 | 0.10 | 0.04 | 0.24 | 0.07 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 1.01 | 0.79 | 0.07 | 0.87 | 1.15 | 0.62 | 0.72 | 0.83 | 0.91 | 0.47 | 0.39 | 0.75 |
| Uniform Delay, d1 | 86.5 | 80.3 | 82.7 | 83.5 | 81.0 | 85.3 | 86.6 | 29.7 | 83.9 | 84.3 | 19.0 | 84.4 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.94 | 1.24 | 1.12 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 54.7 | 9.2 | 0.3 | 19.7 | 89.1 | 9.8 | 8.1 | 2.2 | 37.7 | 1.4 | 0.4 | 19.2 |
| Delay (s) | 141.2 | 89.5 | 82.9 | 103.2 | 170.1 | 95.1 | 89.6 | 39.2 | 131.7 | 85.7 | 19.4 | 103.6 |
| Level of Service | F | F | F | F | F | F | F | D | F | F | B | F |
| Approach Delay (s) | | 109.0 | | | 136.6 | | | 48.5 | | | 35.7 | |
| Approach LOS | | F | | | F | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 68.8 | HCM Level of Service | E |
| HCM Volume to Capacity ratio | 0.88 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 96.2% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 1.00 | | 1.00 | 0.97 | 0.91 | | 1.00 | 0.91 | 1.00 |
| Frt | 1.00 | | 0.85 | 1.00 | | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 5083 | | 1770 | 5085 | 1583 |
| Flt Permitted | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 5083 | | 1770 | 5085 | 1583 |
| Volume (vph) | 132 | 0 | 56 | 12 | 0 | 12 | 223 | 3103 | 8 | 10 | 1569 | 364 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor (vph) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 85% | 100% | 100% | 85% | 100% |
| Adj. Flow (vph) | 132 | 0 | 56 | 12 | 0 | 12 | 223 | 2638 | 8 | 10 | 1334 | 364 |
| RTOR Reduction (vph) | 0 | 0 | 51 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 49 |
| Lane Group Flow (vph) | 132 | 0 | 5 | 12 | 0 | 0 | 223 | 2646 | 0 | 10 | 1334 | 315 |
| Turn Type | custom | | Over | custom | | Over | Prot | | | Prot | | Perm |
| Protected Phases | | | 5 | | | 1 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 6 |
| Actuated Green, G (s) | 12.0 | | 16.4 | 12.0 | | 4.3 | 16.4 | 161.7 | | 4.3 | 149.6 | 149.6 |
| Effective Green, g (s) | 12.0 | | 16.4 | 12.0 | | 4.3 | 16.4 | 161.7 | | 4.3 | 149.6 | 149.6 |
| Actuated g/C Ratio | 0.06 | | 0.09 | 0.06 | | 0.02 | 0.09 | 0.85 | | 0.02 | 0.79 | 0.79 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 217 | | 137 | 112 | | 36 | 296 | 4326 | | 40 | 4004 | 1246 |
| v/s Ratio Prot | | | 0.00 | | | 0.00 | c0.06 | c0.52 | | 0.01 | 0.26 | |
| v/s Ratio Perm | c0.04 | | | 0.01 | | | | | | | | 0.20 |
| v/c Ratio | 0.61 | | 0.04 | 0.11 | | 0.01 | 0.75 | 0.61 | | 0.25 | 0.33 | 0.25 |
| Uniform Delay, d1 | 86.7 | | 79.6 | 83.9 | | 90.8 | 84.8 | 4.4 | | 91.3 | 5.8 | 5.4 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 0.94 | 0.75 | 0.48 |
| Incremental Delay, d2 | 4.8 | | 0.1 | 0.4 | | 0.1 | 10.4 | 0.7 | | 2.9 | 0.2 | 0.4 |
| Delay (s) | 91.5 | | 79.7 | 84.4 | | 90.8 | 95.2 | 5.0 | | 89.1 | 4.5 | 3.0 |
| Level of Service | F | | E | F | | F | F | A | | F | A | A |
| Approach Delay (s) | | 88.0 | | | 87.6 | | | 12.1 | | | 4.7 | |
| Approach LOS | | F | | | F | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 12.8 | HCM Level of Service | B |
| HCM Volume to Capacity ratio | 0.62 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 75.3% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Volume (veh/h) | 7 | 17 | 380 | 114 | 57 | 203 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 7 | 17 | 380 | 114 | 57 | 203 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | 692 |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 754 | 437 | | | 494 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 754 | 437 | | | 494 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 98 | 97 | | | 95 | |
| cM capacity (veh/h) | 357 | 620 | | | 1070 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 24 | 494 | 57 | 203 |
| Volume Left | 7 | 0 | 57 | 0 |
| Volume Right | 17 | 114 | 0 | 0 |
| cSH | 510 | 1700 | 1070 | 1700 |
| Volume to Capacity | 0.05 | 0.29 | 0.05 | 0.12 |
| Queue Length 95th (ft) | 4 | 0 | 4 | 0 |
| Control Delay (s) | 12.4 | 0.0 | 8.6 | 0.0 |
| Lane LOS | B | | A | |
| Approach Delay (s) | 12.4 | 0.0 | 1.9 | |
| Approach LOS | B | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.0 | | |
| Intersection Capacity Utilization | 43.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 2 | 97 | 16 | 1 | 29 | 2 | 0 | 0 | 0 | 46 | 16 | 9 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 2 | 97 | 16 | 1 | 29 | 2 | 0 | 0 | 0 | 46 | 16 | 9 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 115 | 32 | 0 | 71 |
| Volume Left (vph) | 2 | 1 | 0 | 46 |
| Volume Right (vph) | 16 | 2 | 0 | 9 |
| Hadj (s) | -0.05 | 0.00 | 0.00 | 0.09 |
| Departure Headway (s) | 4.0 | 4.2 | 4.3 | 4.3 |
| Degree Utilization, x | 0.13 | 0.04 | 0.00 | 0.08 |
| Capacity (veh/h) | 868 | 839 | 812 | 808 |
| Control Delay (s) | 7.7 | 7.3 | 7.3 | 7.7 |
| Approach Delay (s) | 7.7 | 7.3 | 0.0 | 7.7 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.6 | | |
| HCM Level of Service | A | | |
| Intersection Capacity Utilization | 17.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 3433 | 3471 | | 3433 | 3539 | 1583 | 3433 | 4996 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 3433 | 3471 | | 3433 | 3539 | 1583 | 3433 | 4996 | |
| Volume (vph) | 137 | 557 | 266 | 233 | 560 | 82 | 276 | 921 | 345 | 140 | 769 | 102 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 137 | 557 | 266 | 233 | 560 | 82 | 276 | 921 | 345 | 140 | 769 | 102 |
| RTOR Reduction (vph) | 0 | 0 | 232 | 0 | 10 | 0 | 0 | 0 | 256 | 0 | 14 | 0 |
| Lane Group Flow (vph) | 137 | 557 | 34 | 233 | 632 | 0 | 276 | 921 | 89 | 140 | 857 | 0 |
| Turn Type | Prot | | Over | Prot | | | Prot | | Over | Prot | | |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 13.6 | 32.0 | 14.1 | 7.0 | 25.4 | | 14.1 | 45.3 | 7.0 | 9.7 | 40.9 | |
| Effective Green, g (s) | 13.6 | 32.0 | 14.1 | 7.0 | 25.4 | | 14.1 | 45.3 | 7.0 | 9.7 | 40.9 | |
| Actuated g/C Ratio | 0.12 | 0.29 | 0.13 | 0.06 | 0.23 | | 0.13 | 0.41 | 0.06 | 0.09 | 0.37 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 219 | 1030 | 203 | 218 | 801 | | 440 | 1457 | 101 | 303 | 1858 | |
| v/s Ratio Prot | c0.08 | 0.16 | 0.02 | c0.07 | c0.18 | | c0.08 | c0.26 | 0.06 | 0.04 | 0.17 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.63 | 0.54 | 0.17 | 1.07 | 0.79 | | 0.63 | 0.63 | 0.88 | 0.46 | 0.46 | |
| Uniform Delay, d1 | 45.8 | 32.8 | 42.7 | 51.5 | 39.8 | | 45.5 | 25.7 | 51.1 | 47.7 | 26.2 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 5.5 | 0.6 | 0.4 | 80.4 | 5.2 | | 2.8 | 2.1 | 54.1 | 1.1 | 0.8 | |
| Delay (s) | 51.3 | 33.4 | 43.1 | 131.9 | 45.0 | | 48.2 | 27.8 | 105.2 | 48.8 | 27.0 | |
| Level of Service | D | C | D | F | D | | D | C | F | D | C | |
| Approach Delay (s) | | 38.6 | | | 68.1 | | | 48.8 | | | 30.0 | |
| Approach LOS | | D | | | E | | | D | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 46.1 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.68 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 70.3% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Volume (veh/h) | 13 | 917 | 795 | 21 | 8 | 22 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 13 | 917 | 795 | 21 | 8 | 22 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | 516 | | | |
| pX, platoon unblocked | 0.87 | | | | 0.87 | 0.87 |
| vC, conflicting volume | 816 | | | | 1280 | 398 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 635 | | | | 1169 | 153 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 98 | | | | 95 | 97 |
| cM capacity (veh/h) | 819 | | | | 159 | 751 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | SB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 13 | 458 | 458 | 398 | 398 | 21 | 30 |
| Volume Left | 13 | 0 | 0 | 0 | 0 | 0 | 8 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 21 | 22 |
| cSH | 819 | 1700 | 1700 | 1700 | 1700 | 1700 | 377 |
| Volume to Capacity | 0.02 | 0.27 | 0.27 | 0.23 | 0.23 | 0.01 | 0.08 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 0 | 0 | 6 |
| Control Delay (s) | 9.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15.4 |
| Lane LOS | A | | | | | | C |
| Approach Delay (s) | 0.1 | | | 0.0 | | | 15.4 |
| Approach LOS | | | | | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.3 | | |
| Intersection Capacity Utilization | 35.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 20 | 997 | 0 | 0 | 811 | 10 | 0 | 0 | 4 | 13 | 0 | 38 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 20 | 997 | 0 | 0 | 811 | 10 | 0 | 0 | 4 | 13 | 0 | 38 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 561 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.88 | | | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | |
| vC, conflicting volume | 821 | | | 997 | | | 1480 | 1858 | 498 | 1354 | 1848 | 406 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 821 | | | 860 | | | 1410 | 1839 | 293 | 1265 | 1827 | 406 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 100 | | | 100 | 100 | 99 | 88 | 100 | 94 |
| cM capacity (veh/h) | 804 | | | 684 | | | 80 | 64 | 618 | 108 | 65 | 595 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 20 | 498 | 498 | 406 | 406 | 10 | 4 | 51 |
| Volume Left | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 10 | 4 | 38 |
| cSH | 804 | 1700 | 1700 | 1700 | 1700 | 1700 | 618 | 277 |
| Volume to Capacity | 0.02 | 0.29 | 0.29 | 0.24 | 0.24 | 0.01 | 0.01 | 0.18 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| Control Delay (s) | 9.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.9 | 20.9 |
| Lane LOS | A | | | | | | B | C |
| Approach Delay (s) | 0.2 | | | 0.0 | | | 10.9 | 20.9 |
| Approach LOS | | | | | | | B | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.7 | | |
| Intersection Capacity Utilization | 44.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.94 | | 1.00 | 0.94 | | 1.00 | 0.97 | | 1.00 | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3319 | | 1770 | 3309 | | 1770 | 1816 | | 1770 | 1786 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3319 | | 1770 | 3309 | | 1770 | 1816 | | 1770 | 1786 | |
| Volume (vph) | 147 | 97 | 69 | 115 | 233 | 178 | 60 | 209 | 42 | 33 | 105 | 40 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 147 | 97 | 69 | 115 | 233 | 178 | 60 | 209 | 42 | 33 | 105 | 40 |
| RTOR Reduction (vph) | 0 | 57 | 0 | 0 | 137 | 0 | 0 | 5 | 0 | 0 | 10 | 0 |
| Lane Group Flow (vph) | 147 | 109 | 0 | 115 | 274 | 0 | 60 | 246 | 0 | 33 | 135 | 0 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 9.5 | 13.6 | | 8.4 | 12.5 | | 5.0 | 35.5 | | 2.9 | 33.4 | |
| Effective Green, g (s) | 9.5 | 13.6 | | 8.4 | 12.5 | | 5.0 | 35.5 | | 2.9 | 33.4 | |
| Actuated g/C Ratio | 0.12 | 0.18 | | 0.11 | 0.16 | | 0.07 | 0.46 | | 0.04 | 0.44 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 220 | 591 | | 195 | 541 | | 116 | 844 | | 67 | 781 | |
| v/s Ratio Prot | c0.08 | 0.03 | | 0.06 | c0.08 | | c0.03 | c0.14 | | 0.02 | 0.08 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.67 | 0.18 | | 0.59 | 0.51 | | 0.52 | 0.29 | | 0.49 | 0.17 | |
| Uniform Delay, d1 | 31.9 | 26.7 | | 32.4 | 29.1 | | 34.5 | 12.7 | | 36.0 | 13.1 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 7.5 | 0.2 | | 4.5 | 0.7 | | 3.9 | 0.9 | | 5.6 | 0.5 | |
| Delay (s) | 39.4 | 26.8 | | 36.9 | 29.9 | | 38.4 | 13.5 | | 41.6 | 13.6 | |
| Level of Service | D | C | | D | C | | D | B | | D | B | |
| Approach Delay (s) | | 32.7 | | | 31.4 | | | 18.3 | | | 18.8 | |
| Approach LOS | | C | | | C | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 27.0 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.39 | | |
| Actuated Cycle Length (s) | 76.4 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 53.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | | | 1.00 | 0.85 | | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.96 | 1.00 | | 0.98 | |
| Satd. Flow (prot) | 1770 | 3463 | | 1770 | 3524 | | | 1797 | 1583 | | 1754 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.96 | 1.00 | | 0.98 | |
| Satd. Flow (perm) | 1770 | 3463 | | 1770 | 3524 | | | 1797 | 1583 | | 1754 | |
| Volume (vph) | 17 | 515 | 86 | 61 | 519 | 15 | 113 | 41 | 99 | 28 | 33 | 29 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 17 | 515 | 86 | 61 | 519 | 15 | 113 | 41 | 99 | 28 | 33 | 29 |
| RTOR Reduction (vph) | 0 | 12 | 0 | 0 | 1 | 0 | 0 | 0 | 91 | 0 | 18 | 0 |
| Lane Group Flow (vph) | 17 | 589 | 0 | 61 | 533 | 0 | 0 | 154 | 8 | 0 | 72 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | Over | Split | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 1.3 | 20.3 | | 6.5 | 25.5 | | | 26.8 | 6.5 | | 7.8 | |
| Effective Green, g (s) | 1.3 | 20.3 | | 6.5 | 25.5 | | | 26.8 | 6.5 | | 7.8 | |
| Actuated g/C Ratio | 0.02 | 0.26 | | 0.08 | 0.33 | | | 0.35 | 0.08 | | 0.10 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 30 | 908 | | 149 | 1161 | | | 622 | 133 | | 177 | |
| v/s Ratio Prot | 0.01 | c0.17 | | c0.03 | 0.15 | | | c0.09 | 0.01 | | c0.04 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.57 | 0.65 | | 0.41 | 0.46 | | | 0.25 | 0.06 | | 0.41 | |
| Uniform Delay, d1 | 37.8 | 25.4 | | 33.6 | 20.5 | | | 18.1 | 32.6 | | 32.6 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 22.3 | 1.6 | | 1.8 | 0.3 | | | 0.9 | 0.2 | | 1.5 | |
| Delay (s) | 60.0 | 27.0 | | 35.5 | 20.8 | | | 19.0 | 32.8 | | 34.2 | |
| Level of Service | E | C | | D | C | | | B | C | | C | |
| Approach Delay (s) | | 27.9 | | | 22.3 | | | 24.4 | | | 34.2 | |
| Approach LOS | | C | | | C | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 25.6 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.42 | | |
| Actuated Cycle Length (s) | 77.4 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 47.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 22 | 611 | 20 | 20 | 616 | 32 | 2 | 4 | 38 | 15 | 0 | 15 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 22 | 611 | 20 | 20 | 616 | 32 | 2 | 4 | 38 | 15 | 0 | 15 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 824 | | | 792 | | | | | | | |
| pX, platoon unblocked | 0.92 | | | 0.93 | | | 0.96 | 0.96 | 0.93 | 0.96 | 0.96 | 0.92 |
| vC, conflicting volume | 648 | | | 631 | | | 1028 | 1353 | 316 | 1062 | 1347 | 324 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 538 | | | 526 | | | 766 | 1104 | 187 | 800 | 1098 | 187 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 98 | | | 99 | 98 | 95 | 94 | 100 | 98 |
| cM capacity (veh/h) | 949 | | | 963 | | | 266 | 193 | 765 | 239 | 194 | 761 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 22 | 407 | 224 | 20 | 411 | 237 | 44 | 30 |
| Volume Left | 22 | 0 | 0 | 20 | 0 | 0 | 2 | 15 |
| Volume Right | 0 | 0 | 20 | 0 | 0 | 32 | 38 | 15 |
| cSH | 949 | 1700 | 1700 | 963 | 1700 | 1700 | 564 | 364 |
| Volume to Capacity | 0.02 | 0.24 | 0.13 | 0.02 | 0.24 | 0.14 | 0.08 | 0.08 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 2 | 0 | 0 | 6 | 7 |
| Control Delay (s) | 8.9 | 0.0 | 0.0 | 8.8 | 0.0 | 0.0 | 11.9 | 15.8 |
| Lane LOS | A | | | A | | | B | C |
| Approach Delay (s) | 0.3 | | | 0.3 | | | 11.9 | 15.8 |
| Approach LOS | | | | | | | B | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.0 | | |
| Intersection Capacity Utilization | 33.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 0.90 | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | 0.98 | 1.00 |
| Satd. Flow (prot) | 3539 | 1583 | 1770 | 3539 | 1649 | 1504 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | 0.98 | 1.00 |
| Satd. Flow (perm) | 3539 | 1583 | 1770 | 3539 | 1649 | 1504 |
| Volume (vph) | 641 | 43 | 128 | 608 | 46 | 214 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 641 | 43 | 128 | 608 | 46 | 214 |
| RTOR Reduction (vph) | 0 | 23 | 0 | 0 | 48 | 65 |
| Lane Group Flow (vph) | 641 | 20 | 128 | 608 | 89 | 58 |
| Turn Type | | Over | Prot | | | Prot |
| Protected Phases | 4 | 2 | 3 | 8 | 2 | 2 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 19.1 | 36.1 | 9.1 | 32.2 | 36.1 | 36.1 |
| Effective Green, g (s) | 19.1 | 36.1 | 9.1 | 32.2 | 36.1 | 36.1 |
| Actuated g/C Ratio | 0.25 | 0.47 | 0.12 | 0.42 | 0.47 | 0.47 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 886 | 749 | 211 | 1494 | 780 | 712 |
| v/s Ratio Prot | c0.18 | 0.01 | c0.07 | 0.17 | c0.05 | 0.04 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.72 | 0.03 | 0.61 | 0.41 | 0.11 | 0.08 |
| Uniform Delay, d1 | 26.2 | 10.7 | 31.9 | 15.4 | 11.2 | 11.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 2.9 | 0.1 | 4.9 | 0.2 | 0.3 | 0.2 |
| Delay (s) | 29.1 | 10.8 | 36.8 | 15.6 | 11.5 | 11.2 |
| Level of Service | C | B | D | B | B | B |
| Approach Delay (s) | 28.0 | | | 19.3 | 11.4 | |
| Approach LOS | C | | | B | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 21.6 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.36 | | |
| Actuated Cycle Length (s) | 76.3 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 43.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.86 | 1.00 | 0.97 | 0.86 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 6408 | 1583 | 3433 | 6408 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 6408 | 1583 | 3433 | 6408 | 1583 |
| Volume (vph) | 302 | 409 | 132 | 326 | 443 | 156 | 187 | 1414 | 274 | 175 | 1536 | 132 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 302 | 409 | 132 | 326 | 443 | 156 | 187 | 1414 | 274 | 175 | 1536 | 132 |
| RTOR Reduction (vph) | 0 | 0 | 121 | 0 | 0 | 142 | 0 | 0 | 139 | 0 | 0 | 62 |
| Lane Group Flow (vph) | 302 | 409 | 11 | 326 | 443 | 14 | 187 | 1414 | 135 | 175 | 1536 | 70 |
| Turn Type | Prot | | Over | Prot | | Over | Prot | | Over | Prot | | Over |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 18.0 | 20.0 | 15.3 | 18.0 | 20.0 | 14.7 | 15.3 | 121.3 | 18.0 | 14.7 | 120.7 | 18.0 |
| Effective Green, g (s) | 18.0 | 20.0 | 15.3 | 18.0 | 20.0 | 14.7 | 15.3 | 121.3 | 18.0 | 14.7 | 120.7 | 18.0 |
| Actuated g/C Ratio | 0.09 | 0.11 | 0.08 | 0.09 | 0.11 | 0.08 | 0.08 | 0.64 | 0.09 | 0.08 | 0.64 | 0.09 |
| Clearance 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 |
| 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 | 3.0 |
| Lane Grp Cap (vph) | 325 | 373 | 127 | 325 | 373 | 122 | 276 | 4091 | 150 | 266 | 4071 | 150 |
| v/s Ratio Prot | 0.09 | 0.12 | 0.01 | c0.09 | c0.13 | 0.01 | c0.05 | 0.22 | 0.09 | 0.05 | c0.24 | 0.04 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.93 | 1.10 | 0.08 | 1.00 | 1.19 | 0.11 | 0.68 | 0.35 | 0.90 | 0.66 | 0.38 | 0.47 |
| Uniform Delay, d1 | 85.4 | 85.0 | 80.9 | 86.0 | 85.0 | 81.6 | 85.0 | 15.9 | 85.1 | 85.2 | 16.6 | 81.5 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.89 | 1.26 | 1.24 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 31.8 | 75.1 | 0.3 | 50.7 | 108.3 | 0.4 | 6.1 | 0.2 | 43.9 | 5.8 | 0.3 | 2.3 |
| Delay (s) | 117.1 | 160.1 | 81.1 | 136.7 | 193.3 | 82.0 | 81.7 | 20.3 | 149.4 | 91.0 | 16.9 | 83.8 |
| Level of Service | F | F | F | F | F | F | F | C | F | F | B | F |
| Approach Delay (s) | | 132.4 | | | 154.6 | | | 45.3 | | | 28.7 | |
| Approach LOS | | F | | | F | | | D | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 71.5 | HCM Level of Service | E |
| HCM Volume to Capacity ratio | 0.56 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 64.8% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 1.00 | | 1.00 | 0.97 | 0.86 | | 1.00 | 0.86 | 1.00 |
| Frt | 1.00 | | 0.85 | 1.00 | | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 6403 | | 1770 | 6408 | 1583 |
| Flt Permitted | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 6403 | | 1770 | 6408 | 1583 |
| Volume (vph) | 326 | 0 | 187 | 14 | 0 | 6 | 136 | 1540 | 8 | 9 | 1906 | 206 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 326 | 0 | 187 | 14 | 0 | 6 | 136 | 1540 | 8 | 9 | 1906 | 206 |
| RTOR Reduction (vph) | 0 | 0 | 175 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 27 |
| Lane Group Flow (vph) | 326 | 0 | 12 | 14 | 0 | 0 | 136 | 1548 | 0 | 9 | 1906 | 179 |
| Turn Type | custom | | Over | custom | | Over | Prot | | | Prot | | Perm |
| Protected Phases | | | 5 | | | 1 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 6 |
| Actuated Green, G (s) | 21.4 | | 12.1 | 21.4 | | 3.0 | 12.1 | 153.6 | | 3.0 | 144.5 | 144.5 |
| Effective Green, g (s) | 21.4 | | 12.1 | 21.4 | | 3.0 | 12.1 | 153.6 | | 3.0 | 144.5 | 144.5 |
| Actuated g/C Ratio | 0.11 | | 0.06 | 0.11 | | 0.02 | 0.06 | 0.81 | | 0.02 | 0.76 | 0.76 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 387 | | 101 | 199 | | 25 | 219 | 5176 | | 28 | 4873 | 1204 |
| v/s Ratio Prot | | | 0.01 | | | 0.00 | c0.04 | 0.24 | | 0.01 | c0.30 | |
| v/s Ratio Perm | c0.09 | | | 0.01 | | | | | | | | 0.11 |
| v/c Ratio | 0.84 | | 0.12 | 0.07 | | 0.00 | 0.62 | 0.30 | | 0.32 | 0.39 | 0.15 |
| Uniform Delay, d1 | 82.6 | | 83.9 | 75.4 | | 92.0 | 86.7 | 4.6 | | 92.5 | 7.8 | 6.1 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.02 | 0.90 | 0.78 |
| Incremental Delay, d2 | 15.2 | | 0.5 | 0.2 | | 0.1 | 5.4 | 0.1 | | 5.9 | 0.2 | 0.2 |
| Delay (s) | 97.9 | | 84.4 | 75.6 | | 92.1 | 92.1 | 4.7 | | 100.5 | 7.2 | 5.0 |
| Level of Service | F | | F | E | | F | F | A | | F | A | A |
| Approach Delay (s) | | 93.0 | | | 80.5 | | | 11.8 | | | 7.4 | |
| Approach LOS | | F | | | F | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 19.6 | HCM Level of Service | B |
| HCM Volume to Capacity ratio | 0.46 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 52.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Volume (veh/h) | 38 | 60 | 199 | 22 | 22 | 183 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 38 | 60 | 199 | 22 | 22 | 183 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | 692 |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 437 | 210 | | | 221 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 437 | 210 | | | 221 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 93 | 93 | | | 98 | |
| cM capacity (veh/h) | 567 | 830 | | | 1348 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 98 | 221 | 22 | 183 |
| Volume Left | 38 | 0 | 22 | 0 |
| Volume Right | 60 | 22 | 0 | 0 |
| cSH | 704 | 1700 | 1348 | 1700 |
| Volume to Capacity | 0.14 | 0.13 | 0.02 | 0.11 |
| Queue Length 95th (ft) | 12 | 0 | 1 | 0 |
| Control Delay (s) | 10.9 | 0.0 | 7.7 | 0.0 |
| Lane LOS | B | | A | |
| Approach Delay (s) | 10.9 | 0.0 | 0.8 | |
| Approach LOS | B | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.4 | | |
| Intersection Capacity Utilization | 30.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 13 | 38 | 9 | 0 | 59 | 6 | 7 | 17 | 0 | 19 | 21 | 8 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 13 | 38 | 9 | 0 | 59 | 6 | 7 | 17 | 0 | 19 | 21 | 8 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 60 | 65 | 24 | 48 |
| Volume Left (vph) | 13 | 0 | 7 | 19 |
| Volume Right (vph) | 9 | 6 | 0 | 8 |
| Hadj (s) | -0.01 | -0.02 | 0.09 | 0.01 |
| Departure Headway (s) | 4.1 | 4.1 | 4.3 | 4.2 |
| Degree Utilization, x | 0.07 | 0.07 | 0.03 | 0.06 |
| Capacity (veh/h) | 853 | 857 | 800 | 827 |
| Control Delay (s) | 7.4 | 7.4 | 7.4 | 7.5 |
| Approach Delay (s) | 7.4 | 7.4 | 7.4 | 7.5 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.4 | | |
| HCM Level of Service | A | | |
| Intersection Capacity Utilization | 20.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.97 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 3433 | 3426 | | 3433 | 3539 | 1583 | 3433 | 5011 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 3433 | 3426 | | 3433 | 3539 | 1583 | 3433 | 5011 | |
| Volume (vph) | 118 | 409 | 163 | 251 | 416 | 113 | 188 | 539 | 150 | 84 | 677 | 73 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 118 | 409 | 163 | 251 | 416 | 113 | 188 | 539 | 150 | 84 | 677 | 73 |
| RTOR Reduction (vph) | 0 | 0 | 147 | 0 | 22 | 0 | 0 | 0 | 140 | 0 | 10 | 0 |
| Lane Group Flow (vph) | 118 | 409 | 16 | 251 | 507 | 0 | 188 | 539 | 10 | 84 | 740 | 0 |
| Turn Type | Prot | | Over | Prot | | | Prot | | Over | Prot | | |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 12.4 | 26.5 | 11.1 | 7.0 | 21.1 | | 11.1 | 53.7 | 7.0 | 6.8 | 49.4 | |
| Effective Green, g (s) | 12.4 | 26.5 | 11.1 | 7.0 | 21.1 | | 11.1 | 53.7 | 7.0 | 6.8 | 49.4 | |
| Actuated g/C Ratio | 0.11 | 0.24 | 0.10 | 0.06 | 0.19 | | 0.10 | 0.49 | 0.06 | 0.06 | 0.45 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 200 | 853 | 160 | 218 | 657 | | 346 | 1728 | 101 | 212 | 2250 | |
| v/s Ratio Prot | c0.07 | 0.12 | 0.01 | c0.07 | c0.15 | | c0.05 | 0.15 | 0.01 | 0.02 | c0.15 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.59 | 0.48 | 0.10 | 1.15 | 0.77 | | 0.54 | 0.31 | 0.09 | 0.40 | 0.33 | |
| Uniform Delay, d1 | 46.4 | 35.8 | 44.9 | 51.5 | 42.2 | | 47.0 | 17.0 | 48.5 | 49.6 | 19.6 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 4.6 | 0.4 | 0.3 | 107.8 | 5.6 | | 1.7 | 0.5 | 0.4 | 1.2 | 0.4 | |
| Delay (s) | 51.0 | 36.3 | 45.2 | 159.3 | 47.8 | | 48.8 | 17.5 | 48.9 | 50.8 | 20.0 | |
| Level of Service | D | D | D | F | D | | D | B | D | D | B | |
| Approach Delay (s) | | 40.9 | | | 83.7 | | | 29.6 | | | 23.1 | |
| Approach LOS | | D | | | F | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 43.6 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.52 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 55.7% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Volume (veh/h) | 22 | 597 | 700 | 9 | 8 | 13 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 22 | 597 | 700 | 9 | 8 | 13 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | 516 | | | |
| pX, platoon unblocked | 0.90 | | | | 0.90 | 0.90 |
| vC, conflicting volume | 709 | | | | 1042 | 350 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 569 | | | | 939 | 172 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 98 | | | | 97 | 98 |
| cM capacity (veh/h) | 902 | | | | 231 | 760 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | SB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 22 | 298 | 298 | 350 | 350 | 9 | 21 |
| Volume Left | 22 | 0 | 0 | 0 | 0 | 0 | 8 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 9 | 13 |
| cSH | 902 | 1700 | 1700 | 1700 | 1700 | 1700 | 406 |
| Volume to Capacity | 0.02 | 0.18 | 0.18 | 0.21 | 0.21 | 0.01 | 0.05 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| Control Delay (s) | 9.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 14.3 |
| Lane LOS | A | | | | | | B |
| Approach Delay (s) | 0.3 | | | 0.0 | | | 14.3 |
| Approach LOS | | | | | | | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 29.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 21 | 631 | 0 | 0 | 730 | 10 | 0 | 0 | 12 | 1 | 0 | 14 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 21 | 631 | 0 | 0 | 730 | 10 | 0 | 0 | 12 | 1 | 0 | 14 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 561 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.92 | | | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | |
| vC, conflicting volume | 740 | | | 631 | | | 1052 | 1413 | 316 | 1100 | 1403 | 365 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 740 | | | 506 | | | 966 | 1359 | 162 | 1017 | 1349 | 365 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 100 | | | 100 | 100 | 98 | 99 | 100 | 98 |
| cM capacity (veh/h) | 862 | | | 967 | | | 184 | 132 | 783 | 170 | 134 | 632 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 21 | 316 | 316 | 365 | 365 | 10 | 12 | 15 |
| Volume Left | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 10 | 12 | 14 |
| cSH | 862 | 1700 | 1700 | 1700 | 1700 | 1700 | 783 | 535 |
| Volume to Capacity | 0.02 | 0.19 | 0.19 | 0.21 | 0.21 | 0.01 | 0.02 | 0.03 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| Control Delay (s) | 9.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 9.7 | 11.9 |
| Lane LOS | A | | | | | | A | B |
| Approach Delay (s) | 0.3 | | | 0.0 | | | 9.7 | 11.9 |
| Approach LOS | | | | | | | A | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.3 | | |
| Intersection Capacity Utilization | 34.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.95 | | 1.00 | 0.96 | | 1.00 | 0.95 | | 1.00 | 0.97 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3353 | | 1770 | 3392 | | 1770 | 1763 | | 1770 | 1804 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3353 | | 1770 | 3392 | | 1770 | 1763 | | 1770 | 1804 | |
| Volume (vph) | 53 | 109 | 59 | 43 | 89 | 34 | 73 | 131 | 73 | 72 | 158 | 42 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 53 | 109 | 59 | 43 | 89 | 34 | 73 | 131 | 73 | 72 | 158 | 42 |
| RTOR Reduction (vph) | 0 | 52 | 0 | 0 | 30 | 0 | 0 | 12 | 0 | 0 | 6 | 0 |
| Lane Group Flow (vph) | 53 | 116 | 0 | 43 | 93 | 0 | 73 | 192 | 0 | 72 | 194 | 0 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 5.0 | 8.9 | | 4.7 | 8.6 | | 5.6 | 39.4 | | 5.6 | 39.4 | |
| Effective Green, g (s) | 5.0 | 8.9 | | 4.7 | 8.6 | | 5.6 | 39.4 | | 5.6 | 39.4 | |
| Actuated g/C Ratio | 0.07 | 0.12 | | 0.06 | 0.12 | | 0.08 | 0.53 | | 0.08 | 0.53 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 119 | 400 | | 112 | 391 | | 133 | 931 | | 133 | 953 | |
| v/s Ratio Prot | c0.03 | c0.03 | | 0.02 | 0.03 | | c0.04 | c0.11 | | 0.04 | 0.11 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.45 | 0.29 | | 0.38 | 0.24 | | 0.55 | 0.21 | | 0.54 | 0.20 | |
| Uniform Delay, d1 | 33.5 | 30.0 | | 33.6 | 30.0 | | 33.3 | 9.3 | | 33.3 | 9.3 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 2.6 | 0.4 | | 2.2 | 0.3 | | 4.6 | 0.5 | | 4.4 | 0.5 | |
| Delay (s) | 36.1 | 30.4 | | 35.7 | 30.3 | | 37.9 | 9.8 | | 37.7 | 9.8 | |
| Level of Service | D | C | | D | C | | D | A | | D | A | |
| Approach Delay (s) | | 31.7 | | | 31.7 | | | 17.2 | | | 17.2 | |
| Approach LOS | | C | | | C | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 23.2 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.26 | | |
| Actuated Cycle Length (s) | 74.6 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 44.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | | | 1.00 | 0.85 | | 0.97 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (prot) | 1770 | 3475 | | 1770 | 3522 | | | 1805 | 1583 | | 1790 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (perm) | 1770 | 3475 | | 1770 | 3522 | | | 1805 | 1583 | | 1790 | |
| Volume (vph) | 17 | 637 | 88 | 84 | 602 | 20 | 83 | 47 | 85 | 25 | 48 | 17 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 17 | 637 | 88 | 84 | 602 | 20 | 83 | 47 | 85 | 25 | 48 | 17 |
| RTOR Reduction (vph) | 0 | 9 | 0 | 0 | 2 | 0 | 0 | 0 | 77 | 0 | 9 | 0 |
| Lane Group Flow (vph) | 17 | 716 | 0 | 84 | 620 | 0 | 0 | 130 | 8 | 0 | 81 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | Over | Split | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 2.6 | 22.8 | | 7.4 | 27.6 | | | 27.0 | 7.4 | | 8.0 | |
| Effective Green, g (s) | 2.6 | 22.8 | | 7.4 | 27.6 | | | 27.0 | 7.4 | | 8.0 | |
| Actuated g/C Ratio | 0.03 | 0.28 | | 0.09 | 0.34 | | | 0.33 | 0.09 | | 0.10 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 57 | 976 | | 161 | 1197 | | | 600 | 144 | | 176 | |
| v/s Ratio Prot | 0.01 | c0.21 | | c0.05 | 0.18 | | | c0.07 | 0.00 | | c0.05 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.30 | 0.73 | | 0.52 | 0.52 | | | 0.22 | 0.05 | | 0.46 | |
| Uniform Delay, d1 | 38.4 | 26.4 | | 35.2 | 21.5 | | | 19.5 | 33.7 | | 34.6 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 2.9 | 2.9 | | 3.0 | 0.4 | | | 0.8 | 0.2 | | 1.9 | |
| Delay (s) | 41.3 | 29.3 | | 38.2 | 21.9 | | | 20.3 | 33.9 | | 36.5 | |
| Level of Service | D | C | | D | C | | | C | C | | D | |
| Approach Delay (s) | | 29.6 | | | 23.8 | | | 25.7 | | | 36.5 | |
| Approach LOS | | C | | | C | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 27.1 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.46 | | |
| Actuated Cycle Length (s) | 81.2 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 50.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 17 | 759 | 22 | 9 | 800 | 14 | 1 | 0 | 14 | 7 | 0 | 17 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 17 | 759 | 22 | 9 | 800 | 14 | 1 | 0 | 14 | 7 | 0 | 17 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 824 | | | 792 | | | | | | | |
| pX, platoon unblocked | 0.86 | | | 0.87 | | | 0.93 | 0.93 | 0.87 | 0.93 | 0.93 | 0.86 |
| vC, conflicting volume | 814 | | | 781 | | | 1239 | 1636 | 390 | 1252 | 1640 | 407 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 626 | | | 596 | | | 756 | 1183 | 147 | 771 | 1188 | 154 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 99 | | | 100 | 100 | 98 | 97 | 100 | 98 |
| cM capacity (veh/h) | 821 | | | 848 | | | 263 | 169 | 759 | 258 | 168 | 746 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 17 | 506 | 275 | 9 | 533 | 281 | 15 | 24 |
| Volume Left | 17 | 0 | 0 | 9 | 0 | 0 | 1 | 7 |
| Volume Right | 0 | 0 | 22 | 0 | 0 | 14 | 14 | 17 |
| cSH | 821 | 1700 | 1700 | 848 | 1700 | 1700 | 674 | 481 |
| Volume to Capacity | 0.02 | 0.30 | 0.16 | 0.01 | 0.31 | 0.17 | 0.02 | 0.05 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 1 | 0 | 0 | 2 | 4 |
| Control Delay (s) | 9.5 | 0.0 | 0.0 | 9.3 | 0.0 | 0.0 | 10.5 | 12.9 |
| Lane LOS | A | | | A | | | B | B |
| Approach Delay (s) | 0.2 | | | 0.1 | | | 10.5 | 12.9 |
| Approach LOS | | | | | | | B | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 32.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 0.88 | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | 0.99 | 1.00 |
| Satd. Flow (prot) | 3539 | 1583 | 1770 | 3539 | 1617 | 1504 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | 0.99 | 1.00 |
| Satd. Flow (perm) | 3539 | 1583 | 1770 | 3539 | 1617 | 1504 |
| Volume (vph) | 772 | 46 | 132 | 787 | 31 | 315 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 772 | 46 | 132 | 787 | 31 | 315 |
| RTOR Reduction (vph) | 0 | 25 | 0 | 0 | 84 | 89 |
| Lane Group Flow (vph) | 772 | 21 | 132 | 787 | 100 | 73 |
| Turn Type | | Over | Prot | | | Prot |
| Protected Phases | 4 | 2 | 3 | 8 | 2 | 2 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 23.1 | 36.3 | 9.4 | 36.5 | 36.3 | 36.3 |
| Effective Green, g (s) | 23.1 | 36.3 | 9.4 | 36.5 | 36.3 | 36.3 |
| Actuated g/C Ratio | 0.29 | 0.45 | 0.12 | 0.45 | 0.45 | 0.45 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 1012 | 711 | 206 | 1599 | 726 | 676 |
| v/s Ratio Prot | c0.22 | 0.01 | c0.07 | 0.22 | c0.06 | 0.05 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.76 | 0.03 | 0.64 | 0.49 | 0.14 | 0.11 |
| Uniform Delay, d1 | 26.3 | 12.4 | 34.1 | 15.6 | 13.1 | 12.9 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 3.5 | 0.1 | 6.6 | 0.2 | 0.4 | 0.3 |
| Delay (s) | 29.8 | 12.5 | 40.7 | 15.9 | 13.5 | 13.2 |
| Level of Service | C | B | D | B | B | B |
| Approach Delay (s) | 28.8 | | | 19.4 | 13.3 | |
| Approach LOS | C | | | B | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 22.1 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.42 | | |
| Actuated Cycle Length (s) | 80.8 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 47.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.86 | 1.00 | 0.97 | 0.86 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 6408 | 1583 | 3433 | 6408 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 6408 | 1583 | 3433 | 6408 | 1583 |
| Volume (vph) | 382 | 541 | 192 | 331 | 537 | 166 | 230 | 1508 | 262 | 246 | 1918 | 292 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 382 | 541 | 192 | 331 | 537 | 166 | 230 | 1508 | 262 | 246 | 1918 | 292 |
| RTOR Reduction (vph) | 0 | 0 | 139 | 0 | 0 | 123 | 0 | 0 | 125 | 0 | 0 | 109 |
| Lane Group Flow (vph) | 382 | 541 | 53 | 331 | 537 | 43 | 230 | 1508 | 137 | 246 | 1918 | 183 |
| Turn Type | Prot | | Over | Prot | | Over | Prot | | Over | Prot | | Over |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 18.0 | 20.0 | 16.8 | 18.0 | 20.0 | 17.0 | 16.8 | 119.0 | 18.0 | 17.0 | 119.2 | 18.0 |
| Effective Green, g (s) | 18.0 | 20.0 | 16.8 | 18.0 | 20.0 | 17.0 | 16.8 | 119.0 | 18.0 | 17.0 | 119.2 | 18.0 |
| Actuated g/C Ratio | 0.09 | 0.11 | 0.09 | 0.09 | 0.11 | 0.09 | 0.09 | 0.63 | 0.09 | 0.09 | 0.63 | 0.09 |
| Clearance 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 |
| 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 | 3.0 |
| Lane Grp Cap (vph) | 325 | 373 | 140 | 325 | 373 | 142 | 304 | 4013 | 150 | 307 | 4020 | 150 |
| v/s Ratio Prot | 0.11 | c0.15 | 0.03 | 0.10 | 0.15 | 0.03 | 0.07 | 0.24 | 0.09 | c0.07 | c0.30 | c0.12 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 1.18 | 1.45 | 0.38 | 1.02 | 1.44 | 0.30 | 0.76 | 0.38 | 0.91 | 0.80 | 0.48 | 1.22 |
| Uniform Delay, d1 | 86.0 | 85.0 | 81.7 | 86.0 | 85.0 | 81.0 | 84.6 | 17.3 | 85.2 | 84.8 | 18.8 | 86.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.94 | 1.17 | 1.20 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 106.4 | 217.2 | 1.7 | 54.7 | 212.6 | 1.2 | 9.5 | 0.2 | 45.9 | 13.9 | 0.4 | 145.5 |
| Delay (s) | 192.4 | 302.2 | 83.3 | 140.7 | 297.6 | 82.2 | 89.2 | 20.5 | 148.5 | 98.8 | 19.2 | 231.5 |
| Level of Service | F | F | F | F | F | F | F | C | F | F | B | F |
| Approach Delay (s) | | 226.9 | | | 212.8 | | | 45.1 | | | 52.4 | |
| Approach LOS | | F | | | F | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 104.8 | HCM Level of Service | F |
| HCM Volume to Capacity ratio | 0.68 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 75.2% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 1.00 | | 1.00 | 0.97 | 0.86 | | 1.00 | 0.86 | 1.00 |
| Frt | 1.00 | | 0.85 | 1.00 | | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 6398 | | 1770 | 6408 | 1583 |
| Flt Permitted | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 6398 | | 1770 | 6408 | 1583 |
| Volume (vph) | 350 | 0 | 278 | 8 | 0 | 20 | 192 | 1683 | 18 | 20 | 2230 | 252 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 350 | 0 | 278 | 8 | 0 | 20 | 192 | 1683 | 18 | 20 | 2230 | 252 |
| RTOR Reduction (vph) | 0 | 0 | 256 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 31 |
| Lane Group Flow (vph) | 350 | 0 | 22 | 8 | 0 | 1 | 192 | 1701 | 0 | 20 | 2230 | 221 |
| Turn Type | custom | | Over | custom | | Over | Prot | | | Prot | | Perm |
| Protected Phases | | | 5 | | | 1 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 6 |
| Actuated Green, G (s) | 22.6 | | 15.1 | 22.6 | | 6.4 | 15.1 | 149.0 | | 6.4 | 140.3 | 140.3 |
| Effective Green, g (s) | 22.6 | | 15.1 | 22.6 | | 6.4 | 15.1 | 149.0 | | 6.4 | 140.3 | 140.3 |
| Actuated g/C Ratio | 0.12 | | 0.08 | 0.12 | | 0.03 | 0.08 | 0.78 | | 0.03 | 0.74 | 0.74 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 408 | | 126 | 211 | | 53 | 273 | 5017 | | 60 | 4732 | 1169 |
| v/s Ratio Prot | | | 0.01 | | | 0.00 | c0.06 | 0.27 | | 0.01 | c0.35 | |
| v/s Ratio Perm | c0.10 | | | 0.00 | | | | | | | | 0.14 |
| v/c Ratio | 0.86 | | 0.18 | 0.04 | | 0.01 | 0.70 | 0.34 | | 0.33 | 0.47 | 0.19 |
| Uniform Delay, d1 | 82.1 | | 81.6 | 74.1 | | 88.7 | 85.3 | 6.0 | | 89.7 | 10.0 | 7.6 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 0.96 | 0.80 | 0.77 |
| Incremental Delay, d2 | 16.2 | | 0.7 | 0.1 | | 0.1 | 8.0 | 0.2 | | 2.8 | 0.3 | 0.3 |
| Delay (s) | 98.3 | | 82.3 | 74.2 | | 88.8 | 93.2 | 6.2 | | 88.9 | 8.3 | 6.1 |
| Level of Service | F | | F | E | | F | F | A | | F | A | A |
| Approach Delay (s) | | 91.2 | | | 84.6 | | | 15.0 | | | 8.7 | |
| Approach LOS | | F | | | F | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 21.8 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.54 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 62.9% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Volume (veh/h) | 41 | 37 | 145 | 27 | 30 | 239 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 41 | 37 | 145 | 27 | 30 | 239 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | 692 |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 458 | 158 | | | 172 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 458 | 158 | | | 172 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 93 | 96 | | | 98 | |
| cM capacity (veh/h) | 549 | 887 | | | 1405 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 78 | 172 | 30 | 239 |
| Volume Left | 41 | 0 | 30 | 0 |
| Volume Right | 37 | 27 | 0 | 0 |
| cSH | 670 | 1700 | 1405 | 1700 |
| Volume to Capacity | 0.12 | 0.10 | 0.02 | 0.14 |
| Queue Length 95th (ft) | 10 | 0 | 2 | 0 |
| Control Delay (s) | 11.1 | 0.0 | 7.6 | 0.0 |
| Lane LOS | B | | A | |
| Approach Delay (s) | 11.1 | 0.0 | 0.8 | |
| Approach LOS | B | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 2.1 | | |
| Intersection Capacity Utilization | 27.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 8 | 31 | 3 | 1 | 49 | 0 | 4 | 4 | 0 | 20 | 6 | 2 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 8 | 31 | 3 | 1 | 49 | 0 | 4 | 4 | 0 | 20 | 6 | 2 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 42 | 50 | 8 | 28 |
| Volume Left (vph) | 8 | 1 | 4 | 20 |
| Volume Right (vph) | 3 | 0 | 0 | 2 |
| Hadj (s) | 0.03 | 0.04 | 0.13 | 0.13 |
| Departure Headway (s) | 4.1 | 4.1 | 4.3 | 4.2 |
| Degree Utilization, x | 0.05 | 0.06 | 0.01 | 0.03 |
| Capacity (veh/h) | 871 | 873 | 815 | 827 |
| Control Delay (s) | 7.3 | 7.3 | 7.3 | 7.4 |
| Approach Delay (s) | 7.3 | 7.3 | 7.3 | 7.4 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.3 | | |
| HCM Level of Service | A | | |
| Intersection Capacity Utilization | 16.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 3433 | 3464 | | 3433 | 3539 | 1583 | 3433 | 5009 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 3433 | 3464 | | 3433 | 3539 | 1583 | 3433 | 5009 | |
| Volume (vph) | 115 | 516 | 282 | 225 | 494 | 82 | 238 | 589 | 171 | 110 | 760 | 84 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 115 | 516 | 282 | 225 | 494 | 82 | 238 | 589 | 171 | 110 | 760 | 84 |
| RTOR Reduction (vph) | 0 | 0 | 248 | 0 | 12 | 0 | 0 | 0 | 160 | 0 | 11 | 0 |
| Lane Group Flow (vph) | 115 | 516 | 34 | 225 | 564 | 0 | 238 | 589 | 11 | 110 | 833 | 0 |
| Turn Type | Prot | | Over | Prot | | | Prot | | Over | Prot | | |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 12.2 | 28.5 | 13.1 | 7.0 | 23.3 | | 13.1 | 49.6 | 7.0 | 8.9 | 45.4 | |
| Effective Green, g (s) | 12.2 | 28.5 | 13.1 | 7.0 | 23.3 | | 13.1 | 49.6 | 7.0 | 8.9 | 45.4 | |
| Actuated g/C Ratio | 0.11 | 0.26 | 0.12 | 0.06 | 0.21 | | 0.12 | 0.45 | 0.06 | 0.08 | 0.41 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 196 | 917 | 189 | 218 | 734 | | 409 | 1596 | 101 | 278 | 2067 | |
| v/s Ratio Prot | c0.06 | 0.15 | 0.02 | c0.07 | c0.16 | | c0.07 | 0.17 | 0.01 | 0.03 | c0.17 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.59 | 0.56 | 0.18 | 1.03 | 0.77 | | 0.58 | 0.37 | 0.11 | 0.40 | 0.40 | |
| Uniform Delay, d1 | 46.5 | 35.3 | 43.6 | 51.5 | 40.8 | | 45.9 | 19.9 | 48.6 | 48.0 | 22.8 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 4.4 | 0.8 | 0.5 | 69.6 | 4.9 | | 2.1 | 0.7 | 0.5 | 0.9 | 0.6 | |
| Delay (s) | 50.9 | 36.1 | 44.1 | 121.1 | 45.7 | | 48.0 | 20.6 | 49.0 | 48.9 | 23.3 | |
| Level of Service | D | D | D | F | D | | D | C | D | D | C | |
| Approach Delay (s) | | 40.4 | | | 66.8 | | | 32.0 | | | 26.3 | |
| Approach LOS | | D | | | E | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 40.2 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.57 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 59.3% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Volume (veh/h) | 15 | 680 | 730 | 22 | 13 | 11 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 15 | 680 | 730 | 22 | 13 | 11 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | 516 | | | |
| pX, platoon unblocked | 0.88 | | | | 0.88 | 0.88 |
| vC, conflicting volume | 752 | | | | 1100 | 365 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 579 | | | | 975 | 138 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 98 | | | | 94 | 99 |
| cM capacity (veh/h) | 870 | | | | 215 | 777 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | SB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 15 | 340 | 340 | 365 | 365 | 22 | 24 |
| Volume Left | 15 | 0 | 0 | 0 | 0 | 0 | 13 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 22 | 11 |
| cSH | 870 | 1700 | 1700 | 1700 | 1700 | 1700 | 321 |
| Volume to Capacity | 0.02 | 0.20 | 0.20 | 0.21 | 0.21 | 0.01 | 0.07 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 0 | 0 | 6 |
| Control Delay (s) | 9.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 17.1 |
| Lane LOS | A | | | | | | C |
| Approach Delay (s) | 0.2 | | | 0.0 | | | 17.1 |
| Approach LOS | | | | | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 30.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 30 | 681 | 0 | 0 | 743 | 10 | 0 | 0 | 4 | 3 | 0 | 16 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 30 | 681 | 0 | 0 | 743 | 10 | 0 | 0 | 4 | 3 | 0 | 16 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 561 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.90 | | | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | |
| vC, conflicting volume | 753 | | | 681 | | | 1128 | 1494 | 340 | 1148 | 1484 | 372 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 753 | | | 537 | | | 1033 | 1439 | 159 | 1054 | 1427 | 372 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 96 | | | 100 | | | 100 | 100 | 99 | 98 | 100 | 97 |
| cM capacity (veh/h) | 853 | | | 926 | | | 160 | 115 | 774 | 157 | 116 | 626 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 30 | 340 | 340 | 372 | 372 | 10 | 4 | 19 |
| Volume Left | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 10 | 4 | 16 |
| cSH | 853 | 1700 | 1700 | 1700 | 1700 | 1700 | 774 | 426 |
| Volume to Capacity | 0.04 | 0.20 | 0.20 | 0.22 | 0.22 | 0.01 | 0.01 | 0.04 |
| Queue Length 95th (ft) | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Control Delay (s) | 9.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 9.7 | 13.9 |
| Lane LOS | A | | | | | | A | B |
| Approach Delay (s) | 0.4 | | | 0.0 | | | 9.7 | 13.9 |
| Approach LOS | | | | | | | A | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 35.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.97 | | 1.00 | 0.95 | | 1.00 | 0.91 | | 1.00 | 0.94 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3432 | | 1770 | 3376 | | 1770 | 1700 | | 1770 | 1750 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3432 | | 1770 | 3376 | | 1770 | 1700 | | 1770 | 1750 | |
| Volume (vph) | 40 | 126 | 32 | 87 | 106 | 47 | 38 | 77 | 107 | 58 | 116 | 79 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 40 | 126 | 32 | 87 | 106 | 47 | 38 | 77 | 107 | 58 | 116 | 79 |
| RTOR Reduction (vph) | 0 | 24 | 0 | 0 | 39 | 0 | 0 | 31 | 0 | 0 | 15 | 0 |
| Lane Group Flow (vph) | 40 | 134 | 0 | 87 | 114 | 0 | 38 | 153 | 0 | 58 | 180 | 0 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 4.7 | 9.4 | | 7.8 | 12.5 | | 4.7 | 38.0 | | 5.3 | 38.6 | |
| Effective Green, g (s) | 4.7 | 9.4 | | 7.8 | 12.5 | | 4.7 | 38.0 | | 5.3 | 38.6 | |
| Actuated g/C Ratio | 0.06 | 0.12 | | 0.10 | 0.16 | | 0.06 | 0.50 | | 0.07 | 0.50 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 109 | 422 | | 180 | 552 | | 109 | 844 | | 123 | 883 | |
| v/s Ratio Prot | 0.02 | c0.04 | | c0.05 | c0.03 | | 0.02 | 0.09 | | c0.03 | c0.10 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.37 | 0.32 | | 0.48 | 0.21 | | 0.35 | 0.18 | | 0.47 | 0.20 | |
| Uniform Delay, d1 | 34.5 | 30.6 | | 32.4 | 27.7 | | 34.4 | 10.6 | | 34.3 | 10.5 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 2.1 | 0.4 | | 2.0 | 0.2 | | 1.9 | 0.5 | | 2.8 | 0.5 | |
| Delay (s) | 36.6 | 31.1 | | 34.5 | 27.9 | | 36.4 | 11.1 | | 37.1 | 11.0 | |
| Level of Service | D | C | | C | C | | D | B | | D | B | |
| Approach Delay (s) | | 32.2 | | | 30.3 | | | 15.4 | | | 17.0 | |
| Approach LOS | | C | | | C | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 23.4 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.27 | | |
| Actuated Cycle Length (s) | 76.5 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 44.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | | | 1.00 | 0.85 | | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (prot) | 1770 | 3462 | | 1770 | 3529 | | | 1803 | 1583 | | 1763 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (perm) | 1770 | 3462 | | 1770 | 3529 | | | 1803 | 1583 | | 1763 | |
| Volume (vph) | 59 | 848 | 145 | 105 | 753 | 15 | 160 | 82 | 118 | 35 | 85 | 59 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 59 | 848 | 145 | 105 | 753 | 15 | 160 | 82 | 118 | 35 | 85 | 59 |
| RTOR Reduction (vph) | 0 | 11 | 0 | 0 | 1 | 0 | 0 | 0 | 104 | 0 | 18 | 0 |
| Lane Group Flow (vph) | 59 | 982 | 0 | 105 | 767 | 0 | 0 | 242 | 14 | 0 | 161 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | Over | Split | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 7.3 | 27.1 | | 10.8 | 30.6 | | | 25.1 | 10.8 | | 14.0 | |
| Effective Green, g (s) | 7.3 | 27.1 | | 10.8 | 30.6 | | | 25.1 | 10.8 | | 14.0 | |
| Actuated g/C Ratio | 0.08 | 0.29 | | 0.12 | 0.33 | | | 0.27 | 0.12 | | 0.15 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 139 | 1009 | | 206 | 1161 | | | 487 | 184 | | 265 | |
| v/s Ratio Prot | 0.03 | c0.28 | | c0.06 | c0.22 | | | c0.13 | 0.01 | | c0.09 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.42 | 0.97 | | 0.51 | 0.66 | | | 0.50 | 0.07 | | 0.61 | |
| Uniform Delay, d1 | 40.8 | 32.6 | | 38.6 | 26.7 | | | 28.6 | 36.6 | | 36.9 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 2.1 | 21.8 | | 2.0 | 1.4 | | | 3.6 | 0.2 | | 3.9 | |
| Delay (s) | 42.9 | 54.4 | | 40.6 | 28.2 | | | 32.2 | 36.8 | | 40.9 | |
| Level of Service | D | D | | D | C | | | C | D | | D | |
| Approach Delay (s) | | 53.8 | | | 29.7 | | | 33.7 | | | 40.9 | |
| Approach LOS | | D | | | C | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 41.4 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.72 | | |
| Actuated Cycle Length (s) | 93.0 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 70.4% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 62 | 1038 | 12 | 14 | 900 | 36 | 1 | 3 | 12 | 19 | 0 | 17 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 62 | 1038 | 12 | 14 | 900 | 36 | 1 | 3 | 12 | 19 | 0 | 17 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 824 | | | 792 | | | | | | | |
| pX, platoon unblocked | 0.83 | | | 0.78 | | | 0.87 | 0.87 | 0.78 | 0.87 | 0.87 | 0.83 |
| vC, conflicting volume | 936 | | | 1050 | | | 1663 | 2132 | 525 | 1602 | 2120 | 468 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 712 | | | 784 | | | 1010 | 1550 | 112 | 941 | 1537 | 145 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 92 | | | 98 | | | 99 | 97 | 98 | 89 | 100 | 98 |
| cM capacity (veh/h) | 730 | | | 649 | | | 151 | 88 | 718 | 167 | 89 | 723 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 62 | 692 | 358 | 14 | 600 | 336 | 16 | 36 |
| Volume Left | 62 | 0 | 0 | 14 | 0 | 0 | 1 | 19 |
| Volume Right | 0 | 0 | 12 | 0 | 0 | 36 | 12 | 17 |
| cSH | 730 | 1700 | 1700 | 649 | 1700 | 1700 | 278 | 262 |
| Volume to Capacity | 0.08 | 0.41 | 0.21 | 0.02 | 0.35 | 0.20 | 0.06 | 0.14 |
| Queue Length 95th (ft) | 7 | 0 | 0 | 2 | 0 | 0 | 5 | 12 |
| Control Delay (s) | 10.4 | 0.0 | 0.0 | 10.7 | 0.0 | 0.0 | 18.7 | 20.9 |
| Lane LOS | B | | | B | | | C | C |
| Approach Delay (s) | 0.6 | | | 0.2 | | | 18.7 | 20.9 |
| Approach LOS | | | | | | | C | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.9 | | |
| Intersection Capacity Utilization | 51.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 0.88 | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | 0.99 | 1.00 |
| Satd. Flow (prot) | 3539 | 1583 | 1770 | 3539 | 1617 | 1504 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | 0.99 | 1.00 |
| Satd. Flow (perm) | 3539 | 1583 | 1770 | 3539 | 1617 | 1504 |
| Volume (vph) | 1050 | 24 | 80 | 1004 | 34 | 347 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 1050 | 24 | 80 | 1004 | 34 | 347 |
| RTOR Reduction (vph) | 0 | 13 | 0 | 0 | 99 | 105 |
| Lane Group Flow (vph) | 1050 | 11 | 80 | 1004 | 103 | 74 |
| Turn Type | | Over | Prot | | | Prot |
| Protected Phases | 4 | 2 | 3 | 8 | 2 | 2 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 31.1 | 35.9 | 7.8 | 42.9 | 35.9 | 35.9 |
| Effective Green, g (s) | 31.1 | 35.9 | 7.8 | 42.9 | 35.9 | 35.9 |
| Actuated g/C Ratio | 0.36 | 0.41 | 0.09 | 0.49 | 0.41 | 0.41 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 1268 | 655 | 159 | 1749 | 669 | 622 |
| v/s Ratio Prot | c0.30 | 0.01 | 0.05 | c0.28 | c0.06 | 0.05 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.83 | 0.02 | 0.50 | 0.57 | 0.15 | 0.12 |
| Uniform Delay, d1 | 25.4 | 15.0 | 37.7 | 15.5 | 15.9 | 15.7 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 4.6 | 0.0 | 2.5 | 0.5 | 0.5 | 0.4 |
| Delay (s) | 30.0 | 15.1 | 40.1 | 16.0 | 16.4 | 16.1 |
| Level of Service | C | B | D | B | B | B |
| Approach Delay (s) | 29.7 | | | 17.7 | 16.3 | |
| Approach LOS | C | | | B | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 22.6 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.49 | | |
| Actuated Cycle Length (s) | 86.8 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 53.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | 1.00 | 0.97 | 0.91 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 5085 | 1583 | 3433 | 5085 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 5085 | 1583 | 3433 | 5085 | 1583 |
| Volume (vph) | 442 | 743 | 282 | 364 | 567 | 103 | 161 | 1594 | 339 | 265 | 3175 | 233 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor (vph) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 85% | 100% | 100% | 85% | 100% |
| Adj. Flow (vph) | 442 | 743 | 282 | 364 | 567 | 103 | 161 | 1355 | 339 | 265 | 2699 | 233 |
| RTOR Reduction (vph) | 0 | 0 | 129 | 0 | 0 | 73 | 0 | 0 | 142 | 0 | 0 | 49 |
| Lane Group Flow (vph) | 442 | 743 | 153 | 364 | 567 | 30 | 161 | 1355 | 197 | 265 | 2699 | 184 |
| Turn Type | Prot | | Over | Prot | | Over | Prot | | Over | Prot | | Over |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 18.0 | 20.0 | 18.0 | 18.0 | 20.0 | 17.4 | 18.0 | 118.6 | 18.0 | 17.4 | 118.0 | 18.0 |
| Effective Green, g (s) | 18.0 | 20.0 | 18.0 | 18.0 | 20.0 | 17.4 | 18.0 | 118.6 | 18.0 | 17.4 | 118.0 | 18.0 |
| Actuated g/C Ratio | 0.09 | 0.11 | 0.09 | 0.09 | 0.11 | 0.09 | 0.09 | 0.62 | 0.09 | 0.09 | 0.62 | 0.09 |
| Clearance 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 |
| 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 | 3.0 |
| Lane Grp Cap (vph) | 325 | 373 | 150 | 325 | 373 | 145 | 325 | 3174 | 150 | 314 | 3158 | 150 |
| v/s Ratio Prot | c0.13 | c0.21 | c0.10 | 0.11 | 0.16 | 0.02 | 0.05 | 0.27 | 0.12 | 0.08 | c0.53 | 0.12 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 1.36 | 1.99 | 1.02 | 1.12 | 1.52 | 0.21 | 0.50 | 0.43 | 1.31 | 0.84 | 0.85 | 1.23 |
| Uniform Delay, d1 | 86.0 | 85.0 | 86.0 | 86.0 | 85.0 | 79.9 | 81.7 | 18.3 | 86.0 | 85.0 | 29.1 | 86.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.04 | 1.28 | 1.26 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 180.8 | 455.9 | 79.7 | 86.3 | 247.4 | 0.7 | 1.1 | 0.4 | 176.4 | 18.3 | 3.2 | 147.3 |
| Delay (s) | 266.8 | 540.9 | 165.7 | 172.3 | 332.4 | 80.6 | 86.1 | 23.7 | 284.9 | 103.3 | 32.3 | 233.3 |
| Level of Service | F | F | F | F | F | F | F | C | F | F | C | F |
| Approach Delay (s) | | 386.2 | | | 251.0 | | | 76.9 | | | 52.8 | |
| Approach LOS | | F | | | F | | | E | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 150.6 | HCM Level of Service | F |
| HCM Volume to Capacity ratio | 1.06 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 143.4% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 0.95 | | 0.88 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (prot) | 3539 | 1583 | 1770 | 3539 | | 2787 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (perm) | 3539 | 1583 | 1770 | 3539 | | 2787 |
| Volume (vph) | 772 | 91 | 132 | 806 | 0 | 334 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 772 | 91 | 132 | 806 | 0 | 334 |
| RTOR Reduction (vph) | 0 | 24 | 0 | 0 | 0 | 184 |
| Lane Group Flow (vph) | 772 | 67 | 132 | 806 | 0 | 150 |
| Turn Type | | custom | Prot | | | custom |
| Protected Phases | 4 | 2 | 3 | 8 | | 2 |
| Permitted Phases | | 4 | | | | |
| Actuated Green, G (s) | 23.2 | 59.5 | 9.4 | 36.6 | | 36.3 |
| Effective Green, g (s) | 23.2 | 59.5 | 9.4 | 36.6 | | 36.3 |
| Actuated g/C Ratio | 0.29 | 0.74 | 0.12 | 0.45 | | 0.45 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 1015 | 1243 | 206 | 1601 | | 1251 |
| v/s Ratio Prot | c0.22 | 0.02 | c0.07 | 0.23 | | c0.05 |
| v/s Ratio Perm | | 0.02 | | | | |
| v/c Ratio | 0.76 | 0.05 | 0.64 | 0.50 | | 0.12 |
| Uniform Delay, d1 | 26.3 | 2.9 | 34.1 | 15.7 | | 13.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 3.4 | 0.0 | 6.6 | 0.3 | | 0.2 |
| Delay (s) | 29.7 | 3.0 | 40.8 | 16.0 | | 13.2 |
| Level of Service | C | A | D | B | | B |
| Approach Delay (s) | 26.9 | | | 19.5 | 13.2 | |
| Approach LOS | C | | | B | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 21.5 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.41 | | |
| Actuated Cycle Length (s) | 80.9 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 39.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 1.00 | | 1.00 | 0.97 | 0.91 | | 1.00 | 0.91 | 1.00 |
| Frt | 1.00 | | 0.85 | 1.00 | | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 5081 | | 1770 | 5085 | 1583 |
| Flt Permitted | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 5081 | | 1770 | 5085 | 1583 |
| Volume (vph) | 451 | 0 | 214 | 8 | 0 | 9 | 75 | 1612 | 7 | 32 | 3552 | 109 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor (vph) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 85% | 100% | 100% | 85% | 100% |
| Adj. Flow (vph) | 451 | 0 | 214 | 8 | 0 | 9 | 75 | 1370 | 7 | 32 | 3019 | 109 |
| RTOR Reduction (vph) | 0 | 0 | 203 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 8 |
| Lane Group Flow (vph) | 451 | 0 | 11 | 8 | 0 | 0 | 75 | 1377 | 0 | 32 | 3019 | 101 |
| Turn Type | custom | | Over | custom | | Over | Prot | | | Prot | | Perm |
| Protected Phases | | | 5 | | | 1 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 6 |
| Actuated Green, G (s) | 28.0 | | 9.9 | 28.0 | | 7.5 | 9.9 | 142.5 | | 7.5 | 140.1 | 140.1 |
| Effective Green, g (s) | 28.0 | | 9.9 | 28.0 | | 7.5 | 9.9 | 142.5 | | 7.5 | 140.1 | 140.1 |
| Actuated g/C Ratio | 0.15 | | 0.05 | 0.15 | | 0.04 | 0.05 | 0.75 | | 0.04 | 0.74 | 0.74 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 506 | | 82 | 261 | | 62 | 179 | 3811 | | 70 | 3750 | 1167 |
| v/s Ratio Prot | | | 0.01 | | | 0.00 | c0.02 | 0.27 | | 0.02 | c0.59 | |
| v/s Ratio Perm | c0.13 | | | 0.00 | | | | | | | | 0.06 |
| v/c Ratio | 0.89 | | 0.14 | 0.03 | | 0.01 | 0.42 | 0.36 | | 0.46 | 0.81 | 0.09 |
| Uniform Delay, d1 | 79.5 | | 86.0 | 69.4 | | 87.7 | 87.3 | 8.1 | | 89.3 | 16.1 | 7.0 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 0.86 | 0.60 | 0.92 |
| Incremental Delay, d2 | 17.7 | | 0.8 | 0.0 | | 0.0 | 1.6 | 0.3 | | 2.0 | 0.8 | 0.1 |
| Delay (s) | 97.2 | | 86.7 | 69.4 | | 87.7 | 88.8 | 8.4 | | 78.4 | 10.5 | 6.5 |
| Level of Service | F | | F | E | | F | F | A | | E | B | A |
| Approach Delay (s) | | 93.8 | | | 79.1 | | | 12.6 | | | 11.0 | |
| Approach LOS | | F | | | E | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 22.1 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.80 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 84.9% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Volume (veh/h) | 92 | 74 | 254 | 14 | 11 | 432 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 92 | 74 | 254 | 14 | 11 | 432 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | 692 |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 715 | 261 | | | 268 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 715 | 261 | | | 268 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 77 | 90 | | | 99 | |
| cM capacity (veh/h) | 394 | 778 | | | 1296 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 166 | 268 | 11 | 432 |
| Volume Left | 92 | 0 | 11 | 0 |
| Volume Right | 74 | 14 | 0 | 0 |
| cSH | 505 | 1700 | 1296 | 1700 |
| Volume to Capacity | 0.33 | 0.16 | 0.01 | 0.25 |
| Queue Length 95th (ft) | 36 | 0 | 1 | 0 |
| Control Delay (s) | 15.6 | 0.0 | 7.8 | 0.0 |
| Lane LOS | C | | A | |
| Approach Delay (s) | 15.6 | 0.0 | 0.2 | |
| Approach LOS | C | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.0 | | |
| Intersection Capacity Utilization | 39.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 9 | 16 | 0 | 0 | 106 | 7 | 7 | 11 | 0 | 10 | 1 | 5 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 9 | 16 | 0 | 0 | 106 | 7 | 7 | 11 | 0 | 10 | 1 | 5 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 25 | 113 | 18 | 16 |
| Volume Left (vph) | 9 | 0 | 7 | 10 |
| Volume Right (vph) | 0 | 7 | 0 | 5 |
| Hadj (s) | 0.11 | 0.00 | 0.11 | -0.03 |
| Departure Headway (s) | 4.2 | 4.0 | 4.3 | 4.2 |
| Degree Utilization, x | 0.03 | 0.13 | 0.02 | 0.02 |
| Capacity (veh/h) | 842 | 888 | 797 | 828 |
| Control Delay (s) | 7.3 | 7.6 | 7.4 | 7.3 |
| Approach Delay (s) | 7.3 | 7.6 | 7.4 | 7.3 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.5 | | |
| HCM Level of Service | A | | |
| Intersection Capacity Utilization | 18.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 3433 | 3472 | | 3433 | 3539 | 1583 | 3433 | 5019 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 3433 | 3472 | | 3433 | 3539 | 1583 | 3433 | 5019 | |
| Volume (vph) | 152 | 719 | 314 | 348 | 729 | 105 | 309 | 610 | 181 | 170 | 1078 | 102 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 152 | 719 | 314 | 348 | 729 | 105 | 309 | 610 | 181 | 170 | 1078 | 102 |
| RTOR Reduction (vph) | 0 | 0 | 271 | 0 | 9 | 0 | 0 | 0 | 169 | 0 | 10 | 0 |
| Lane Group Flow (vph) | 152 | 719 | 43 | 348 | 825 | 0 | 309 | 610 | 12 | 170 | 1170 | 0 |
| Turn Type | Prot | | Over | Prot | | | Prot | | Over | Prot | | |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 14.4 | 32.0 | 15.1 | 7.0 | 24.6 | | 15.1 | 44.6 | 7.0 | 10.4 | 39.9 | |
| Effective Green, g (s) | 14.4 | 32.0 | 15.1 | 7.0 | 24.6 | | 15.1 | 44.6 | 7.0 | 10.4 | 39.9 | |
| Actuated g/C Ratio | 0.13 | 0.29 | 0.14 | 0.06 | 0.22 | | 0.14 | 0.41 | 0.06 | 0.09 | 0.36 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 232 | 1030 | 217 | 218 | 776 | | 471 | 1435 | 101 | 325 | 1821 | |
| v/s Ratio Prot | c0.09 | 0.20 | 0.03 | c0.10 | c0.24 | | c0.09 | 0.17 | 0.01 | 0.05 | c0.23 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.66 | 0.70 | 0.20 | 1.60 | 1.06 | | 0.66 | 0.43 | 0.11 | 0.52 | 0.64 | |
| Uniform Delay, d1 | 45.4 | 34.7 | 42.1 | 51.5 | 42.7 | | 45.0 | 23.5 | 48.6 | 47.4 | 29.1 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 6.5 | 2.1 | 0.5 | 288.9 | 50.3 | | 3.3 | 0.9 | 0.5 | 1.5 | 1.8 | |
| Delay (s) | 51.9 | 36.8 | 42.5 | 340.4 | 93.0 | | 48.3 | 24.4 | 49.1 | 49.0 | 30.9 | |
| Level of Service | D | D | D | F | F | | D | C | D | D | C | |
| Approach Delay (s) | | 40.3 | | | 165.8 | | | 35.2 | | | 33.2 | |
| Approach LOS | | D | | | F | | | D | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 67.9 | HCM Level of Service | E |
| HCM Volume to Capacity ratio | 0.82 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 77.2% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Volume (veh/h) | 50 | 1043 | 903 | 22 | 6 | 19 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 50 | 1043 | 903 | 22 | 6 | 19 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | 516 | | | |
| pX, platoon unblocked | 0.83 | | | | 0.83 | 0.83 |
| vC, conflicting volume | 925 | | | | 1524 | 452 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 704 | | | | 1427 | 133 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 93 | | | | 94 | 97 |
| cM capacity (veh/h) | 738 | | | | 98 | 740 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | SB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 50 | 522 | 522 | 452 | 452 | 22 | 25 |
| Volume Left | 50 | 0 | 0 | 0 | 0 | 0 | 6 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 22 | 19 |
| cSH | 738 | 1700 | 1700 | 1700 | 1700 | 1700 | 287 |
| Volume to Capacity | 0.07 | 0.31 | 0.31 | 0.27 | 0.27 | 0.01 | 0.09 |
| Queue Length 95th (ft) | 5 | 0 | 0 | 0 | 0 | 0 | 7 |
| Control Delay (s) | 10.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 18.8 |
| Lane LOS | B | | | | | | C |
| Approach Delay (s) | 0.5 | | | 0.0 | | | 18.8 |
| Approach LOS | | | | | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.5 | | |
| Intersection Capacity Utilization | 41.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 42 | 1033 | 0 | 0 | 955 | 14 | 0 | 0 | 34 | 3 | 0 | 34 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 42 | 1033 | 0 | 0 | 955 | 14 | 0 | 0 | 34 | 3 | 0 | 34 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 561 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.83 | | | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | |
| vC, conflicting volume | 969 | | | 1033 | | | 1628 | 2086 | 516 | 1590 | 2072 | 478 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 969 | | | 831 | | | 1551 | 2104 | 206 | 1504 | 2087 | 478 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 94 | | | 100 | | | 100 | 100 | 95 | 95 | 100 | 94 |
| cM capacity (veh/h) | 707 | | | 659 | | | 57 | 40 | 662 | 63 | 41 | 534 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 42 | 516 | 516 | 478 | 478 | 14 | 34 | 37 |
| Volume Left | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 14 | 34 | 34 |
| cSH | 707 | 1700 | 1700 | 1700 | 1700 | 1700 | 662 | 332 |
| Volume to Capacity | 0.06 | 0.30 | 0.30 | 0.28 | 0.28 | 0.01 | 0.05 | 0.11 |
| Queue Length 95th (ft) | 5 | 0 | 0 | 0 | 0 | 0 | 4 | 9 |
| Control Delay (s) | 10.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.7 | 17.2 |
| Lane LOS | B | | | | | | B | C |
| Approach Delay (s) | 0.4 | | | 0.0 | | | 10.7 | 17.2 |
| Approach LOS | | | | | | | B | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.7 | | |
| Intersection Capacity Utilization | 45.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.97 | | 1.00 | 0.96 | | 1.00 | 0.92 | | 1.00 | 0.95 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3419 | | 1770 | 3383 | | 1770 | 1707 | | 1770 | 1778 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3419 | | 1770 | 3383 | | 1770 | 1707 | | 1770 | 1778 | |
| Volume (vph) | 33 | 249 | 73 | 84 | 110 | 46 | 69 | 146 | 183 | 151 | 298 | 129 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 33 | 249 | 73 | 84 | 110 | 46 | 69 | 146 | 183 | 151 | 298 | 129 |
| RTOR Reduction (vph) | 0 | 26 | 0 | 0 | 37 | 0 | 0 | 32 | 0 | 0 | 12 | 0 |
| Lane Group Flow (vph) | 33 | 296 | 0 | 84 | 119 | 0 | 69 | 297 | 0 | 151 | 415 | 0 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 4.5 | 14.2 | | 8.0 | 17.7 | | 7.4 | 41.5 | | 10.8 | 44.9 | |
| Effective Green, g (s) | 4.5 | 14.2 | | 8.0 | 17.7 | | 7.4 | 41.5 | | 10.8 | 44.9 | |
| Actuated g/C Ratio | 0.05 | 0.16 | | 0.09 | 0.20 | | 0.08 | 0.46 | | 0.12 | 0.50 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 88 | 536 | | 156 | 662 | | 145 | 783 | | 211 | 882 | |
| v/s Ratio Prot | 0.02 | c0.09 | | c0.05 | c0.04 | | 0.04 | 0.17 | | c0.09 | c0.23 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.38 | 0.55 | | 0.54 | 0.18 | | 0.48 | 0.38 | | 0.72 | 0.47 | |
| Uniform Delay, d1 | 41.6 | 35.2 | | 39.5 | 30.3 | | 39.7 | 16.1 | | 38.4 | 15.0 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 2.7 | 1.2 | | 3.5 | 0.1 | | 2.5 | 1.4 | | 11.0 | 1.8 | |
| Delay (s) | 44.3 | 36.4 | | 43.0 | 30.5 | | 42.2 | 17.4 | | 49.3 | 16.8 | |
| Level of Service | D | D | | D | C | | D | B | | D | B | |
| Approach Delay (s) | | 37.2 | | | 34.9 | | | 21.7 | | | 25.3 | |
| Approach LOS | | D | | | C | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 28.5 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.55 | | |
| Actuated Cycle Length (s) | 90.5 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 57.8% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

# Appendix D

## Synchro Level of Service Calculations – Future Conditions

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | | | 1.00 | 0.85 | | 0.95 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (prot) | 1770 | 3451 | | 1770 | 3532 | | | 1814 | 1583 | | 1747 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (perm) | 1770 | 3451 | | 1770 | 3532 | | | 1814 | 1583 | | 1747 | |
| Volume (vph) | 30 | 805 | 160 | 137 | 761 | 11 | 99 | 84 | 107 | 30 | 54 | 52 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 30 | 805 | 160 | 137 | 761 | 11 | 99 | 84 | 107 | 30 | 54 | 52 |
| RTOR Reduction (vph) | 0 | 14 | 0 | 0 | 1 | 0 | 0 | 0 | 93 | 0 | 23 | 0 |
| Lane Group Flow (vph) | 30 | 951 | 0 | 137 | 771 | 0 | 0 | 183 | 14 | 0 | 113 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | Over | Split | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 4.6 | 27.7 | | 12.1 | 35.2 | | | 25.1 | 12.1 | | 12.1 | |
| Effective Green, g (s) | 4.6 | 27.7 | | 12.1 | 35.2 | | | 25.1 | 12.1 | | 12.1 | |
| Actuated g/C Ratio | 0.05 | 0.30 | | 0.13 | 0.38 | | | 0.27 | 0.13 | | 0.13 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 88 | 1028 | | 230 | 1337 | | | 490 | 206 | | 227 | |
| v/s Ratio Prot | 0.02 | c0.28 | | c0.08 | 0.22 | | | c0.10 | 0.01 | | c0.06 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.34 | 0.93 | | 0.60 | 0.58 | | | 0.37 | 0.07 | | 0.50 | |
| Uniform Delay, d1 | 42.7 | 31.6 | | 38.1 | 23.0 | | | 27.6 | 35.5 | | 37.6 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 2.3 | 13.5 | | 4.1 | 0.6 | | | 2.2 | 0.1 | | 1.7 | |
| Delay (s) | 45.0 | 45.1 | | 42.2 | 23.6 | | | 29.7 | 35.6 | | 39.3 | |
| Level of Service | D | D | | D | C | | | C | D | | D | |
| Approach Delay (s) | | 45.1 | | | 26.4 | | | 31.9 | | | 39.3 | |
| Approach LOS | | D | | | C | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 35.8 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.63 | | |
| Actuated Cycle Length (s) | 93.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 61.5% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | | | 1.00 | |
| Frt | 1.00 | 0.99 | | 1.00 | 0.99 | | | 0.97 | | | 0.93 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.96 | | | 0.98 | |
| Satd. Flow (prot) | 1770 | 3508 | | 1770 | 3520 | | | 1739 | | | 1692 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.96 | | | 0.98 | |
| Satd. Flow (perm) | 1770 | 3508 | | 1770 | 3520 | | | 1739 | | | 1692 | |
| Volume (vph) | 39 | 898 | 57 | 39 | 892 | 34 | 21 | 0 | 6 | 24 | 1 | 28 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 39 | 898 | 57 | 39 | 892 | 34 | 21 | 0 | 6 | 24 | 1 | 28 |
| RTOR Reduction (vph) | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 6 | 0 | 0 | 26 | 0 |
| Lane Group Flow (vph) | 39 | 953 | 0 | 39 | 925 | 0 | 0 | 21 | 0 | 0 | 27 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | | Split | | |
| Protected Phases | 5 | 2 | | 1 | 6 | | 8 | 8 | | 4 | 4 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 5.4 | 62.4 | | 5.4 | 62.4 | | | 4.1 | | | 6.5 | |
| Effective Green, g (s) | 5.4 | 62.4 | | 5.4 | 62.4 | | | 4.1 | | | 6.5 | |
| Actuated g/C Ratio | 0.06 | 0.66 | | 0.06 | 0.66 | | | 0.04 | | | 0.07 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | 101 | 2319 | | 101 | 2327 | | | 76 | | | 117 | |
| v/s Ratio Prot | c0.02 | c0.27 | | 0.02 | 0.26 | | | c0.01 | | | c0.02 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.39 | 0.41 | | 0.39 | 0.40 | | | 0.28 | | | 0.23 | |
| Uniform Delay, d1 | 42.9 | 7.4 | | 42.9 | 7.4 | | | 43.7 | | | 41.6 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | 2.4 | 0.5 | | 2.4 | 0.5 | | | 2.0 | | | 1.0 | |
| Delay (s) | 45.3 | 8.0 | | 45.3 | 7.9 | | | 45.7 | | | 42.6 | |
| Level of Service | D | A | | D | A | | | D | | | D | |
| Approach Delay (s) | | 9.5 | | | 9.4 | | | 45.7 | | | 42.6 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 10.8 | HCM Level of Service | B |
| HCM Volume to Capacity ratio | 0.39 | | |
| Actuated Cycle Length (s) | 94.4 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 47.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 0.95 | | 0.88 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (prot) | 3539 | 1583 | 1770 | 3539 | | 2787 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (perm) | 3539 | 1583 | 1770 | 3539 | | 2787 |
| Volume (vph) | 834 | 124 | 363 | 983 | 0 | 145 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 834 | 124 | 363 | 983 | 0 | 145 |
| RTOR Reduction (vph) | 0 | 80 | 0 | 0 | 0 | 93 |
| Lane Group Flow (vph) | 834 | 44 | 363 | 983 | 0 | 52 |
| Turn Type | | custom | Prot | | | custom |
| Protected Phases | 4 | 2 | 3 | 8 | | 2 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 28.8 | 35.5 | 23.5 | 56.3 | | 35.5 |
| Effective Green, g (s) | 28.8 | 35.5 | 23.5 | 56.3 | | 35.5 |
| Actuated g/C Ratio | 0.29 | 0.36 | 0.24 | 0.56 | | 0.36 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 1021 | 563 | 417 | 1996 | | 991 |
| v/s Ratio Prot | c0.24 | c0.03 | c0.21 | 0.28 | | 0.02 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.82 | 0.08 | 0.87 | 0.49 | | 0.05 |
| Uniform Delay, d1 | 33.0 | 21.3 | 36.7 | 13.1 | | 21.1 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 5.2 | 0.3 | 17.6 | 0.2 | | 0.1 |
| Delay (s) | 38.2 | 21.6 | 54.3 | 13.3 | | 21.2 |
| Level of Service | D | C | D | B | | C |
| Approach Delay (s) | 36.0 | | | 24.4 | 21.2 | |
| Approach LOS | D | | | C | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 28.8 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.53 | | |
| Actuated Cycle Length (s) | 99.8 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 49.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | 1.00 | 0.97 | 0.91 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 5085 | 1583 | 3433 | 5085 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 5085 | 1583 | 3433 | 5085 | 1583 |
| Volume (vph) | 392 | 421 | 127 | 361 | 726 | 254 | 192 | 3340 | 223 | 137 | 1596 | 322 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor (vph) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 85% | 100% | 100% | 85% | 100% |
| Adj. Flow (vph) | 392 | 421 | 127 | 361 | 726 | 254 | 192 | 2839 | 223 | 137 | 1357 | 322 |
| RTOR Reduction (vph) | 0 | 0 | 118 | 0 | 0 | 141 | 0 | 0 | 44 | 0 | 0 | 135 |
| Lane Group Flow (vph) | 392 | 421 | 9 | 361 | 726 | 113 | 192 | 2839 | 179 | 137 | 1357 | 187 |
| Turn Type | Prot | | Over | Prot | | Over | Prot | | Over | Prot | | Over |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 17.0 | 24.0 | 13.6 | 21.0 | 28.0 | 16.5 | 13.6 | 112.5 | 21.0 | 16.5 | 115.4 | 17.0 |
| Effective Green, g (s) | 17.0 | 24.0 | 13.6 | 21.0 | 28.0 | 16.5 | 13.6 | 112.5 | 21.0 | 16.5 | 115.4 | 17.0 |
| Actuated g/C Ratio | 0.09 | 0.13 | 0.07 | 0.11 | 0.15 | 0.09 | 0.07 | 0.59 | 0.11 | 0.09 | 0.61 | 0.09 |
| Clearance 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 |
| 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 | 3.0 |
| Lane Grp Cap (vph) | 307 | 447 | 113 | 379 | 522 | 137 | 246 | 3011 | 175 | 298 | 3088 | 142 |
| v/s Ratio Prot | 0.11 | 0.12 | 0.01 | 0.11 | c0.21 | c0.07 | 0.06 | c0.56 | 0.11 | 0.04 | c0.27 | c0.12 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 1.28 | 0.94 | 0.08 | 0.95 | 1.39 | 0.83 | 0.78 | 0.94 | 1.02 | 0.46 | 0.44 | 1.32 |
| Uniform Delay, d1 | 86.5 | 82.3 | 82.4 | 84.0 | 81.0 | 85.4 | 86.7 | 35.8 | 84.5 | 82.5 | 20.0 | 86.5 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.94 | 1.21 | 1.13 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 147.4 | 28.3 | 0.3 | 33.9 | 187.4 | 31.8 | 11.5 | 6.0 | 64.5 | 1.1 | 0.5 | 184.2 |
| Delay (s) | 233.9 | 110.6 | 82.7 | 117.9 | 268.4 | 117.2 | 93.4 | 49.3 | 160.1 | 83.6 | 20.4 | 270.7 |
| Level of Service | F | F | F | F | F | F | F | D | F | F | C | F |
| Approach Delay (s) | | 158.3 | | | 199.2 | | | 59.5 | | | 69.6 | |
| Approach LOS | | F | | | F | | | E | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 100.1 | HCM Level of Service | F |
| HCM Volume to Capacity ratio | 1.06 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 107.8% | ICU Level of Service | G |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 1.00 | | 1.00 | 0.97 | 0.91 | | 1.00 | 0.91 | 1.00 |
| Frt | 1.00 | | 0.85 | 1.00 | | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 5083 | | 1770 | 5085 | 1583 |
| Flt Permitted | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 5083 | | 1770 | 5085 | 1583 |
| Volume (vph) | 148 | 0 | 69 | 13 | 0 | 13 | 276 | 3475 | 9 | 11 | 1757 | 408 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor (vph) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 85% | 100% | 100% | 85% | 100% |
| Adj. Flow (vph) | 148 | 0 | 69 | 13 | 0 | 13 | 276 | 2954 | 9 | 11 | 1493 | 408 |
| RTOR Reduction (vph) | 0 | 0 | 62 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 53 |
| Lane Group Flow (vph) | 148 | 0 | 7 | 13 | 0 | 0 | 276 | 2963 | 0 | 11 | 1493 | 355 |
| Turn Type | custom | | Over | custom | | Over | Prot | | | Prot | | Perm |
| Protected Phases | | | 5 | | | 1 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 6 |
| Actuated Green, G (s) | 12.6 | | 19.2 | 12.6 | | 4.4 | 19.2 | 161.0 | | 4.4 | 146.2 | 146.2 |
| Effective Green, g (s) | 12.6 | | 19.2 | 12.6 | | 4.4 | 19.2 | 161.0 | | 4.4 | 146.2 | 146.2 |
| Actuated g/C Ratio | 0.07 | | 0.10 | 0.07 | | 0.02 | 0.10 | 0.85 | | 0.02 | 0.77 | 0.77 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 228 | | 160 | 117 | | 37 | 347 | 4307 | | 41 | 3913 | 1218 |
| v/s Ratio Prot | | | 0.00 | | | 0.00 | c0.08 | c0.58 | | 0.01 | 0.29 | |
| v/s Ratio Perm | c0.04 | | | 0.01 | | | | | | | | 0.22 |
| v/c Ratio | 0.65 | | 0.04 | 0.11 | | 0.01 | 0.80 | 0.69 | | 0.27 | 0.38 | 0.29 |
| Uniform Delay, d1 | 86.5 | | 77.1 | 83.4 | | 90.7 | 83.5 | 5.3 | | 91.2 | 7.1 | 6.5 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 0.95 | 0.74 | 0.53 |
| Incremental Delay, d2 | 6.2 | | 0.1 | 0.4 | | 0.1 | 11.9 | 0.9 | | 3.0 | 0.2 | 0.5 |
| Delay (s) | 92.8 | | 77.2 | 83.9 | | 90.8 | 95.4 | 6.2 | | 89.3 | 5.5 | 4.0 |
| Level of Service | F | | E | F | | F | F | A | | F | A | A |
| Approach Delay (s) | | 87.8 | | | 87.3 | | | 13.8 | | | 5.7 | |
| Approach LOS | | F | | | F | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 14.3 | HCM Level of Service | B |
| HCM Volume to Capacity ratio | 0.69 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 81.4% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Volume (veh/h) | 35 | 3 | 427 | 253 | 80 | 228 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 35 | 3 | 427 | 253 | 80 | 228 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | 692 |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 942 | 554 | | | 680 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 942 | 554 | | | 680 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 87 | 99 | | | 91 | |
| cM capacity (veh/h) | 266 | 532 | | | 912 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 38 | 680 | 80 | 228 |
| Volume Left | 35 | 0 | 80 | 0 |
| Volume Right | 3 | 253 | 0 | 0 |
| cSH | 277 | 1700 | 912 | 1700 |
| Volume to Capacity | 0.14 | 0.40 | 0.09 | 0.13 |
| Queue Length 95th (ft) | 12 | 0 | 7 | 0 |
| Control Delay (s) | 20.0 | 0.0 | 9.3 | 0.0 |
| Lane LOS | C | | A | |
| Approach Delay (s) | 20.0 | 0.0 | 2.4 | |
| Approach LOS | C | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.5 | | |
| Intersection Capacity Utilization | 55.7% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 2 | 250 | 18 | 1 | 44 | 22 | 0 | 0 | 0 | 57 | 18 | 10 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 2 | 250 | 18 | 1 | 44 | 22 | 0 | 0 | 0 | 57 | 18 | 10 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 270 | 67 | 0 | 85 |
| Volume Left (vph) | 2 | 1 | 0 | 57 |
| Volume Right (vph) | 18 | 22 | 0 | 10 |
| Hadj (s) | 0.00 | -0.16 | 0.00 | 0.10 |
| Departure Headway (s) | 4.2 | 4.2 | 4.8 | 4.7 |
| Degree Utilization, x | 0.31 | 0.08 | 0.00 | 0.11 |
| Capacity (veh/h) | 843 | 811 | 702 | 704 |
| Control Delay (s) | 9.1 | 7.6 | 7.8 | 8.3 |
| Approach Delay (s) | 9.1 | 7.6 | 0.0 | 8.3 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 8.7 | | |
| HCM Level of Service | A | | |
| Intersection Capacity Utilization | 26.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 3433 | 3471 | | 3433 | 3539 | 1583 | 3433 | 4996 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 3433 | 3471 | | 3433 | 3539 | 1583 | 3433 | 4996 | |
| Volume (vph) | 153 | 646 | 298 | 263 | 630 | 93 | 309 | 1032 | 400 | 162 | 861 | 114 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 153 | 646 | 298 | 263 | 630 | 93 | 309 | 1032 | 400 | 162 | 861 | 114 |
| RTOR Reduction (vph) | 0 | 0 | 257 | 0 | 10 | 0 | 0 | 0 | 265 | 0 | 15 | 0 |
| Lane Group Flow (vph) | 153 | 646 | 41 | 263 | 713 | 0 | 309 | 1032 | 135 | 162 | 960 | 0 |
| Turn Type | Prot | | Over | Prot | | | Prot | | Over | Prot | | |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 14.5 | 32.0 | 15.1 | 7.0 | 24.5 | | 15.1 | 44.8 | 7.0 | 10.2 | 39.9 | |
| Effective Green, g (s) | 14.5 | 32.0 | 15.1 | 7.0 | 24.5 | | 15.1 | 44.8 | 7.0 | 10.2 | 39.9 | |
| Actuated g/C Ratio | 0.13 | 0.29 | 0.14 | 0.06 | 0.22 | | 0.14 | 0.41 | 0.06 | 0.09 | 0.36 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 233 | 1030 | 217 | 218 | 773 | | 471 | 1441 | 101 | 318 | 1812 | |
| v/s Ratio Prot | c0.09 | 0.18 | 0.03 | 0.08 | c0.21 | | c0.09 | c0.29 | c0.09 | 0.05 | 0.19 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.66 | 0.63 | 0.19 | 1.21 | 0.92 | | 0.66 | 0.72 | 1.34 | 0.51 | 0.53 | |
| Uniform Delay, d1 | 45.4 | 33.8 | 42.0 | 51.5 | 41.8 | | 45.0 | 27.3 | 51.5 | 47.5 | 27.7 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 6.5 | 1.2 | 0.4 | 127.9 | 16.4 | | 3.3 | 3.1 | 204.1 | 1.3 | 1.1 | |
| Delay (s) | 51.9 | 35.0 | 42.4 | 179.4 | 58.2 | | 48.3 | 30.4 | 255.6 | 48.8 | 28.8 | |
| Level of Service | D | D | D | F | E | | D | C | F | D | C | |
| Approach Delay (s) | | 39.4 | | | 90.5 | | | 85.3 | | | 31.6 | |
| Approach LOS | | D | | | F | | | F | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 63.9 | HCM Level of Service | E |
| HCM Volume to Capacity ratio | 0.78 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 76.5% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Volume (veh/h) | 15 | 1068 | 896 | 24 | 9 | 25 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 15 | 1068 | 896 | 24 | 9 | 25 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | 516 | | | |
| pX, platoon unblocked | 0.83 | | | | 0.83 | 0.83 |
| vC, conflicting volume | 920 | | | | 1460 | 448 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 706 | | | | 1353 | 140 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 98 | | | | 92 | 97 |
| cM capacity (veh/h) | 741 | | | | 115 | 736 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | SB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 15 | 534 | 534 | 448 | 448 | 24 | 34 |
| Volume Left | 15 | 0 | 0 | 0 | 0 | 0 | 9 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 24 | 25 |
| cSH | 741 | 1700 | 1700 | 1700 | 1700 | 1700 | 304 |
| Volume to Capacity | 0.02 | 0.31 | 0.31 | 0.26 | 0.26 | 0.01 | 0.11 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 0 | 0 | 9 |
| Control Delay (s) | 10.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 18.3 |
| Lane LOS | A | | | | | | C |
| Approach Delay (s) | 0.1 | | | 0.0 | | | 18.3 |
| Approach LOS | | | | | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 39.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 22 | 1158 | 0 | 0 | 914 | 11 | 0 | 0 | 4 | 15 | 0 | 43 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 22 | 1158 | 0 | 0 | 914 | 11 | 0 | 0 | 4 | 15 | 0 | 43 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 561 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.85 | | | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | |
| vC, conflicting volume | 925 | | | 1158 | | | 1702 | 2127 | 579 | 1541 | 2116 | 457 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 925 | | | 1011 | | | 1650 | 2149 | 331 | 1461 | 2136 | 457 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 97 | | | 100 | | | 100 | 100 | 99 | 80 | 100 | 92 |
| cM capacity (veh/h) | 734 | | | 580 | | | 50 | 39 | 566 | 74 | 40 | 551 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 22 | 579 | 579 | 457 | 457 | 11 | 4 | 58 |
| Volume Left | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 11 | 4 | 43 |
| cSH | 734 | 1700 | 1700 | 1700 | 1700 | 1700 | 566 | 207 |
| Volume to Capacity | 0.03 | 0.34 | 0.34 | 0.27 | 0.27 | 0.01 | 0.01 | 0.28 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 27 |
| Control Delay (s) | 10.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 11.4 | 29.0 |
| Lane LOS | B | | | | | | B | D |
| Approach Delay (s) | 0.2 | | | 0.0 | | | 11.4 | 29.0 |
| Approach LOS | | | | | | | B | D |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.9 | | |
| Intersection Capacity Utilization | 48.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.94 | | 1.00 | 0.92 | | 1.00 | 0.98 | | 1.00 | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3319 | | 1770 | 3258 | | 1770 | 1819 | | 1770 | 1784 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3319 | | 1770 | 3258 | | 1770 | 1819 | | 1770 | 1784 | |
| Volume (vph) | 177 | 109 | 77 | 129 | 261 | 295 | 67 | 253 | 47 | 61 | 120 | 47 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 177 | 109 | 77 | 129 | 261 | 295 | 67 | 253 | 47 | 61 | 120 | 47 |
| RTOR Reduction (vph) | 0 | 59 | 0 | 0 | 196 | 0 | 0 | 5 | 0 | 0 | 11 | 0 |
| Lane Group Flow (vph) | 177 | 127 | 0 | 129 | 360 | 0 | 67 | 295 | 0 | 61 | 156 | 0 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 13.4 | 19.7 | | 9.6 | 15.9 | | 7.1 | 35.1 | | 5.4 | 33.4 | |
| Effective Green, g (s) | 13.4 | 19.7 | | 9.6 | 15.9 | | 7.1 | 35.1 | | 5.4 | 33.4 | |
| Actuated g/C Ratio | 0.16 | 0.23 | | 0.11 | 0.19 | | 0.08 | 0.41 | | 0.06 | 0.39 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 276 | 762 | | 198 | 604 | | 146 | 744 | | 111 | 694 | |
| v/s Ratio Prot | c0.10 | c0.04 | | 0.07 | c0.11 | | c0.04 | c0.16 | | 0.03 | 0.09 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.64 | 0.17 | | 0.65 | 0.60 | | 0.46 | 0.40 | | 0.55 | 0.22 | |
| Uniform Delay, d1 | 33.9 | 26.5 | | 36.5 | 32.0 | | 37.5 | 17.9 | | 39.0 | 17.5 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 5.0 | 0.1 | | 7.5 | 1.6 | | 2.3 | 1.6 | | 5.5 | 0.8 | |
| Delay (s) | 39.0 | 26.6 | | 44.0 | 33.6 | | 39.8 | 19.5 | | 44.5 | 18.3 | |
| Level of Service | D | C | | D | C | | D | B | | D | B | |
| Approach Delay (s) | | 32.6 | | | 35.6 | | | 23.2 | | | 25.3 | |
| Approach LOS | | C | | | D | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 30.7 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.49 | | |
| Actuated Cycle Length (s) | 85.8 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 61.8% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | | | 1.00 | 0.85 | | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.98 | |
| Satd. Flow (prot) | 1770 | 3453 | | 1770 | 3526 | | | 1805 | 1583 | | 1755 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.98 | |
| Satd. Flow (perm) | 1770 | 3453 | | 1770 | 3526 | | | 1805 | 1583 | | 1755 | |
| Volume (vph) | 19 | 599 | 116 | 69 | 647 | 17 | 83 | 46 | 112 | 31 | 37 | 32 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 19 | 599 | 116 | 69 | 647 | 17 | 83 | 46 | 112 | 31 | 37 | 32 |
| RTOR Reduction (vph) | 0 | 14 | 0 | 0 | 1 | 0 | 0 | 0 | 103 | 0 | 18 | 0 |
| Lane Group Flow (vph) | 19 | 701 | 0 | 69 | 663 | 0 | 0 | 129 | 9 | 0 | 82 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | Over | Split | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 2.6 | 22.5 | | 6.8 | 26.7 | | | 27.0 | 6.8 | | 8.1 | |
| Effective Green, g (s) | 2.6 | 22.5 | | 6.8 | 26.7 | | | 27.0 | 6.8 | | 8.1 | |
| Actuated g/C Ratio | 0.03 | 0.28 | | 0.08 | 0.33 | | | 0.34 | 0.08 | | 0.10 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 57 | 966 | | 150 | 1171 | | | 606 | 134 | | 177 | |
| v/s Ratio Prot | 0.01 | c0.20 | | c0.04 | 0.19 | | | c0.07 | 0.01 | | c0.05 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.33 | 0.73 | | 0.46 | 0.57 | | | 0.21 | 0.07 | | 0.46 | |
| Uniform Delay, d1 | 38.1 | 26.2 | | 35.1 | 22.1 | | | 19.1 | 33.9 | | 34.1 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 3.4 | 2.7 | | 2.2 | 0.6 | | | 0.8 | 0.2 | | 1.9 | |
| Delay (s) | 41.5 | 28.9 | | 37.3 | 22.7 | | | 19.9 | 34.1 | | 36.0 | |
| Level of Service | D | C | | D | C | | | B | C | | D | |
| Approach Delay (s) | | 29.2 | | | 24.1 | | | 26.5 | | | 36.0 | |
| Approach LOS | | C | | | C | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 27.2 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.45 | | |
| Actuated Cycle Length (s) | 80.4 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 49.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | | | 1.00 | |
| Frt | 1.00 | 0.99 | | 1.00 | 0.99 | | | 0.95 | | | 0.93 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | | | 0.98 | |
| Satd. Flow (prot) | 1770 | 3517 | | 1770 | 3513 | | | 1715 | | | 1695 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | | | 0.98 | |
| Satd. Flow (perm) | 1770 | 3517 | | 1770 | 3513 | | | 1715 | | | 1695 | |
| Volume (vph) | 25 | 699 | 30 | 22 | 695 | 36 | 63 | 4 | 43 | 17 | 0 | 17 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 25 | 699 | 30 | 22 | 695 | 36 | 63 | 4 | 43 | 17 | 0 | 17 |
| RTOR Reduction (vph) | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 23 | 0 | 0 | 16 | 0 |
| Lane Group Flow (vph) | 25 | 727 | 0 | 22 | 729 | 0 | 0 | 87 | 0 | 0 | 18 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | | Split | | |
| Protected Phases | 5 | 2 | | 1 | 6 | | 8 | 8 | | 4 | 4 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 3.2 | 51.8 | | 3.1 | 51.7 | | | 11.5 | | | 4.0 | |
| Effective Green, g (s) | 3.2 | 51.8 | | 3.1 | 51.7 | | | 11.5 | | | 4.0 | |
| Actuated g/C Ratio | 0.04 | 0.60 | | 0.04 | 0.60 | | | 0.13 | | | 0.05 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | 66 | 2109 | | 64 | 2102 | | | 228 | | | 78 | |
| v/s Ratio Prot | c0.01 | 0.21 | | 0.01 | c0.21 | | | c0.05 | | | c0.01 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.38 | 0.34 | | 0.34 | 0.35 | | | 0.38 | | | 0.23 | |
| Uniform Delay, d1 | 40.6 | 8.7 | | 40.7 | 8.8 | | | 34.2 | | | 39.7 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | 3.6 | 0.4 | | 3.2 | 0.5 | | | 1.1 | | | 1.5 | |
| Delay (s) | 44.2 | 9.2 | | 43.9 | 9.2 | | | 35.3 | | | 41.2 | |
| Level of Service | D | A | | D | A | | | D | | | D | |
| Approach Delay (s) | | 10.3 | | | 10.3 | | | 35.3 | | | 41.2 | |
| Approach LOS | | B | | | B | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 12.6 | HCM Level of Service | B |
| HCM Volume to Capacity ratio | 0.35 | | |
| Actuated Cycle Length (s) | 86.4 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 35.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 0.95 | | 0.88 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (prot) | 3539 | 1583 | 1770 | 3539 | | 2787 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (perm) | 3539 | 1583 | 1770 | 3539 | | 2787 |
| Volume (vph) | 718 | 63 | 349 | 696 | 0 | 363 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 718 | 63 | 349 | 696 | 0 | 363 |
| RTOR Reduction (vph) | 0 | 39 | 0 | 0 | 0 | 227 |
| Lane Group Flow (vph) | 718 | 24 | 349 | 696 | 0 | 136 |
| Turn Type | | custom | Prot | | | custom |
| Protected Phases | 4 | 2 | 3 | 8 | | 2 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 24.7 | 35.5 | 22.4 | 51.1 | | 35.5 |
| Effective Green, g (s) | 24.7 | 35.5 | 22.4 | 51.1 | | 35.5 |
| Actuated g/C Ratio | 0.26 | 0.38 | 0.24 | 0.54 | | 0.38 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 924 | 594 | 419 | 1912 | | 1046 |
| v/s Ratio Prot | c0.20 | 0.01 | c0.20 | 0.20 | | c0.05 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.78 | 0.04 | 0.83 | 0.36 | | 0.13 |
| Uniform Delay, d1 | 32.4 | 18.7 | 34.3 | 12.4 | | 19.4 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 4.2 | 0.1 | 13.3 | 0.1 | | 0.3 |
| Delay (s) | 36.6 | 18.9 | 47.6 | 12.6 | | 19.7 |
| Level of Service | D | B | D | B | | B |
| Approach Delay (s) | 35.1 | | | 24.3 | 19.7 | |
| Approach LOS | D | | | C | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 27.4 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.51 | | |
| Actuated Cycle Length (s) | 94.6 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 45.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.86 | 1.00 | 0.97 | 0.86 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 6408 | 1583 | 3433 | 6408 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 6408 | 1583 | 3433 | 6408 | 1583 |
| Volume (vph) | 430 | 490 | 148 | 365 | 568 | 175 | 209 | 1584 | 307 | 196 | 1720 | 282 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 430 | 490 | 148 | 365 | 568 | 175 | 209 | 1584 | 307 | 196 | 1720 | 282 |
| RTOR Reduction (vph) | 0 | 0 | 121 | 0 | 0 | 124 | 0 | 0 | 139 | 0 | 0 | 118 |
| Lane Group Flow (vph) | 430 | 490 | 27 | 365 | 568 | 51 | 209 | 1584 | 168 | 196 | 1720 | 164 |
| Turn Type | Prot | | Over | Prot | | Over | Prot | | Over | Prot | | Over |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 18.0 | 20.0 | 16.0 | 18.0 | 20.0 | 15.6 | 16.0 | 120.4 | 18.0 | 15.6 | 120.0 | 18.0 |
| Effective Green, g (s) | 18.0 | 20.0 | 16.0 | 18.0 | 20.0 | 15.6 | 16.0 | 120.4 | 18.0 | 15.6 | 120.0 | 18.0 |
| Actuated g/C Ratio | 0.09 | 0.11 | 0.08 | 0.09 | 0.11 | 0.08 | 0.08 | 0.63 | 0.09 | 0.08 | 0.63 | 0.09 |
| Clearance 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 |
| 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 | 3.0 |
| Lane Grp Cap (vph) | 325 | 373 | 133 | 325 | 373 | 130 | 289 | 4061 | 150 | 282 | 4047 | 150 |
| v/s Ratio Prot | c0.13 | 0.14 | 0.02 | 0.11 | c0.16 | 0.03 | c0.06 | 0.25 | 0.11 | 0.06 | c0.27 | 0.10 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 1.32 | 1.31 | 0.20 | 1.12 | 1.52 | 0.39 | 0.72 | 0.39 | 1.12 | 0.70 | 0.43 | 1.10 |
| Uniform Delay, d1 | 86.0 | 85.0 | 81.1 | 86.0 | 85.0 | 82.7 | 84.8 | 16.9 | 86.0 | 84.9 | 17.6 | 86.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.19 | 1.23 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 165.3 | 159.1 | 0.8 | 87.4 | 248.6 | 2.0 | 8.0 | 0.3 | 105.4 | 7.2 | 0.3 | 101.3 |
| Delay (s) | 251.3 | 244.1 | 81.8 | 173.4 | 333.6 | 84.7 | 88.4 | 20.5 | 210.8 | 92.1 | 18.0 | 187.3 |
| Level of Service | F | F | F | F | F | F | F | C | F | F | B | F |
| Approach Delay (s) | | 224.5 | | | 241.5 | | | 55.0 | | | 46.3 | |
| Approach LOS | | F | | | F | | | E | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 111.9 | HCM Level of Service | F |
| HCM Volume to Capacity ratio | 0.67 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 74.6% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 1.00 | | 1.00 | 0.97 | 0.86 | | 1.00 | 0.86 | 1.00 |
| Frt | 1.00 | | 0.85 | 1.00 | | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 6403 | | 1770 | 6408 | 1583 |
| Flt Permitted | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 6403 | | 1770 | 6408 | 1583 |
| Volume (vph) | 365 | 0 | 232 | 16 | 0 | 7 | 169 | 1725 | 9 | 10 | 2135 | 231 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 365 | 0 | 232 | 16 | 0 | 7 | 169 | 1725 | 9 | 10 | 2135 | 231 |
| RTOR Reduction (vph) | 0 | 0 | 215 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 29 |
| Lane Group Flow (vph) | 365 | 0 | 17 | 16 | 0 | 0 | 169 | 1734 | 0 | 10 | 2135 | 202 |
| Turn Type | custom | | Over | custom | | Over | Prot | | | Prot | | Perm |
| Protected Phases | | | 5 | | | 1 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 6 |
| Actuated Green, G (s) | 23.4 | | 13.7 | 23.4 | | 4.4 | 13.7 | 150.2 | | 4.4 | 140.9 | 140.9 |
| Effective Green, g (s) | 23.4 | | 13.7 | 23.4 | | 4.4 | 13.7 | 150.2 | | 4.4 | 140.9 | 140.9 |
| Actuated g/C Ratio | 0.12 | | 0.07 | 0.12 | | 0.02 | 0.07 | 0.79 | | 0.02 | 0.74 | 0.74 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 423 | | 114 | 218 | | 37 | 248 | 5062 | | 41 | 4752 | 1174 |
| v/s Ratio Prot | | | 0.01 | | | 0.00 | c0.05 | 0.27 | | 0.01 | c0.33 | |
| v/s Ratio Perm | c0.11 | | | 0.01 | | | | | | | | 0.13 |
| v/c Ratio | 0.86 | | 0.15 | 0.07 | | 0.00 | 0.68 | 0.34 | | 0.24 | 0.45 | 0.17 |
| Uniform Delay, d1 | 81.7 | | 82.7 | 73.7 | | 90.7 | 86.0 | 5.7 | | 91.2 | 9.5 | 7.3 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 0.97 | 0.87 | 0.81 |
| Incremental Delay, d2 | 16.4 | | 0.6 | 0.1 | | 0.0 | 7.5 | 0.2 | | 2.7 | 0.3 | 0.3 |
| Delay (s) | 98.1 | | 83.3 | 73.9 | | 90.7 | 93.5 | 5.9 | | 91.0 | 8.5 | 6.2 |
| Level of Service | F | | F | E | | F | F | A | | F | A | A |
| Approach Delay (s) | | 92.4 | | | 79.0 | | | 13.7 | | | 8.6 | |
| Approach LOS | | F | | | E | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 21.1 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.52 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 58.6% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Volume (veh/h) | 126 | 24 | 224 | 195 | 44 | 206 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 126 | 24 | 224 | 195 | 44 | 206 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | 692 |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 616 | 322 | | | 419 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 616 | 322 | | | 419 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 71 | 97 | | | 96 | |
| cM capacity (veh/h) | 437 | 719 | | | 1140 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 150 | 419 | 44 | 206 |
| Volume Left | 126 | 0 | 44 | 0 |
| Volume Right | 24 | 195 | 0 | 0 |
| cSH | 466 | 1700 | 1140 | 1700 |
| Volume to Capacity | 0.32 | 0.25 | 0.04 | 0.12 |
| Queue Length 95th (ft) | 34 | 0 | 3 | 0 |
| Control Delay (s) | 16.3 | 0.0 | 8.3 | 0.0 |
| Lane LOS | C | | A | |
| Approach Delay (s) | 16.3 | 0.0 | 1.5 | |
| Approach LOS | C | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.4 | | |
| Intersection Capacity Utilization | 45.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 15 | 233 | 10 | 0 | 106 | 46 | 8 | 19 | 0 | 29 | 24 | 9 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 15 | 233 | 10 | 0 | 106 | 46 | 8 | 19 | 0 | 29 | 24 | 9 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 258 | 152 | 27 | 62 |
| Volume Left (vph) | 15 | 0 | 8 | 29 |
| Volume Right (vph) | 10 | 46 | 0 | 9 |
| Hadj (s) | 0.02 | -0.15 | 0.09 | 0.04 |
| Departure Headway (s) | 4.3 | 4.3 | 5.0 | 4.9 |
| Degree Utilization, x | 0.31 | 0.18 | 0.04 | 0.08 |
| Capacity (veh/h) | 814 | 809 | 656 | 672 |
| Control Delay (s) | 9.2 | 8.2 | 8.2 | 8.3 |
| Approach Delay (s) | 9.2 | 8.2 | 8.2 | 8.3 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 8.7 | | |
| HCM Level of Service | A | | |
| Intersection Capacity Utilization | 37.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.97 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 3433 | 3426 | | 3433 | 3539 | 1583 | 3433 | 5011 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 3433 | 3426 | | 3433 | 3539 | 1583 | 3433 | 5011 | |
| Volume (vph) | 132 | 485 | 183 | 288 | 478 | 130 | 211 | 604 | 178 | 99 | 758 | 82 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 132 | 485 | 183 | 288 | 478 | 130 | 211 | 604 | 178 | 99 | 758 | 82 |
| RTOR Reduction (vph) | 0 | 0 | 163 | 0 | 21 | 0 | 0 | 0 | 167 | 0 | 11 | 0 |
| Lane Group Flow (vph) | 132 | 485 | 20 | 288 | 587 | 0 | 211 | 604 | 11 | 99 | 829 | 0 |
| Turn Type | Prot | | Over | Prot | | | Prot | | Over | Prot | | |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 13.2 | 30.3 | 11.8 | 7.0 | 24.1 | | 11.8 | 48.1 | 7.0 | 8.6 | 44.9 | |
| Effective Green, g (s) | 13.2 | 30.3 | 11.8 | 7.0 | 24.1 | | 11.8 | 48.1 | 7.0 | 8.6 | 44.9 | |
| Actuated g/C Ratio | 0.12 | 0.28 | 0.11 | 0.06 | 0.22 | | 0.11 | 0.44 | 0.06 | 0.08 | 0.41 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 212 | 975 | 170 | 218 | 751 | | 368 | 1548 | 101 | 268 | 2045 | |
| v/s Ratio Prot | c0.07 | 0.14 | 0.01 | c0.08 | c0.17 | | c0.06 | c0.17 | 0.01 | 0.03 | 0.17 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.62 | 0.50 | 0.12 | 1.32 | 0.78 | | 0.57 | 0.39 | 0.11 | 0.37 | 0.41 | |
| Uniform Delay, d1 | 46.0 | 33.5 | 44.4 | 51.5 | 40.5 | | 46.7 | 21.0 | 48.6 | 48.1 | 23.1 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 5.6 | 0.4 | 0.3 | 172.9 | 5.3 | | 2.2 | 0.7 | 0.5 | 0.9 | 0.6 | |
| Delay (s) | 51.6 | 33.9 | 44.7 | 224.4 | 45.8 | | 48.9 | 21.7 | 49.1 | 49.0 | 23.7 | |
| Level of Service | D | C | D | F | D | | D | C | D | D | C | |
| Approach Delay (s) | | 39.3 | | | 103.2 | | | 32.4 | | | 26.4 | |
| Approach LOS | | D | | | F | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 49.8 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.59 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 60.5% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Volume (veh/h) | 25 | 711 | 806 | 10 | 9 | 15 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 25 | 711 | 806 | 10 | 9 | 15 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | 516 | | | |
| pX, platoon unblocked | 0.86 | | | | 0.86 | 0.86 |
| vC, conflicting volume | 816 | | | | 1212 | 403 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 622 | | | | 1082 | 141 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 97 | | | | 95 | 98 |
| cM capacity (veh/h) | 820 | | | | 177 | 757 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | SB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 25 | 356 | 356 | 403 | 403 | 10 | 24 |
| Volume Left | 25 | 0 | 0 | 0 | 0 | 0 | 9 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 10 | 15 |
| cSH | 820 | 1700 | 1700 | 1700 | 1700 | 1700 | 339 |
| Volume to Capacity | 0.03 | 0.21 | 0.21 | 0.24 | 0.24 | 0.01 | 0.07 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 0 | 0 | 6 |
| Control Delay (s) | 9.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 16.4 |
| Lane LOS | A | | | | | | C |
| Approach Delay (s) | 0.3 | | | 0.0 | | | 16.4 |
| Approach LOS | | | | | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 32.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 24 | 749 | 0 | 0 | 840 | 11 | 0 | 0 | 13 | 1 | 0 | 16 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 24 | 749 | 0 | 0 | 840 | 11 | 0 | 0 | 13 | 1 | 0 | 16 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 561 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.90 | | | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | |
| vC, conflicting volume | 851 | | | 749 | | | 1233 | 1648 | 374 | 1276 | 1637 | 420 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 851 | | | 607 | | | 1146 | 1608 | 190 | 1193 | 1596 | 420 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 97 | | | 100 | | | 100 | 100 | 98 | 99 | 100 | 97 |
| cM capacity (veh/h) | 783 | | | 869 | | | 132 | 90 | 736 | 123 | 92 | 582 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 24 | 374 | 374 | 420 | 420 | 11 | 13 | 17 |
| Volume Left | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 11 | 13 | 16 |
| cSH | 783 | 1700 | 1700 | 1700 | 1700 | 1700 | 736 | 477 |
| Volume to Capacity | 0.03 | 0.22 | 0.22 | 0.25 | 0.25 | 0.01 | 0.02 | 0.04 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| Control Delay (s) | 9.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.0 | 12.8 |
| Lane LOS | A | | | | | | A | B |
| Approach Delay (s) | 0.3 | | | 0.0 | | | 10.0 | 12.8 |
| Approach LOS | | | | | | | A | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 37.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.94 | | 1.00 | 0.91 | | 1.00 | 0.95 | | 1.00 | 0.97 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3326 | | 1770 | 3206 | | 1770 | 1773 | | 1770 | 1798 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3326 | | 1770 | 3206 | | 1770 | 1773 | | 1770 | 1798 | |
| Volume (vph) | 59 | 122 | 82 | 48 | 100 | 168 | 82 | 172 | 82 | 148 | 188 | 57 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 59 | 122 | 82 | 48 | 100 | 168 | 82 | 172 | 82 | 148 | 188 | 57 |
| RTOR Reduction (vph) | 0 | 70 | 0 | 0 | 144 | 0 | 0 | 12 | 0 | 0 | 7 | 0 |
| Lane Group Flow (vph) | 59 | 134 | 0 | 48 | 124 | 0 | 82 | 242 | 0 | 148 | 238 | 0 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 5.0 | 10.9 | | 4.7 | 10.6 | | 7.3 | 32.5 | | 9.5 | 34.7 | |
| Effective Green, g (s) | 5.0 | 10.9 | | 4.7 | 10.6 | | 7.3 | 32.5 | | 9.5 | 34.7 | |
| Actuated g/C Ratio | 0.07 | 0.15 | | 0.06 | 0.14 | | 0.10 | 0.44 | | 0.13 | 0.47 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 120 | 493 | | 113 | 462 | | 176 | 783 | | 228 | 848 | |
| v/s Ratio Prot | c0.03 | c0.04 | | 0.03 | 0.04 | | 0.05 | c0.14 | | c0.08 | 0.13 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.49 | 0.27 | | 0.42 | 0.27 | | 0.47 | 0.31 | | 0.65 | 0.28 | |
| Uniform Delay, d1 | 33.1 | 27.8 | | 33.1 | 28.0 | | 31.3 | 13.3 | | 30.5 | 11.8 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 3.1 | 0.3 | | 2.6 | 0.3 | | 1.9 | 1.0 | | 6.2 | 0.8 | |
| Delay (s) | 36.2 | 28.1 | | 35.7 | 28.4 | | 33.3 | 14.3 | | 36.7 | 12.7 | |
| Level of Service | D | C | | D | C | | C | B | | D | B | |
| Approach Delay (s) | | 29.9 | | | 29.5 | | | 18.9 | | | 21.7 | |
| Approach LOS | | C | | | C | | | B | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 24.5 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.34 | | |
| Actuated Cycle Length (s) | 73.6 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 49.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | | | 1.00 | 0.85 | | 0.97 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (prot) | 1770 | 3469 | | 1770 | 3524 | | | 1813 | 1583 | | 1791 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (perm) | 1770 | 3469 | | 1770 | 3524 | | | 1813 | 1583 | | 1791 | |
| Volume (vph) | 19 | 730 | 111 | 95 | 745 | 22 | 65 | 53 | 96 | 28 | 54 | 19 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 19 | 730 | 111 | 95 | 745 | 22 | 65 | 53 | 96 | 28 | 54 | 19 |
| RTOR Reduction (vph) | 0 | 10 | 0 | 0 | 1 | 0 | 0 | 0 | 87 | 0 | 9 | 0 |
| Lane Group Flow (vph) | 19 | 831 | 0 | 95 | 766 | 0 | 0 | 118 | 9 | 0 | 92 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | Over | Split | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 2.7 | 27.3 | | 8.1 | 32.7 | | | 26.0 | 8.1 | | 8.4 | |
| Effective Green, g (s) | 2.7 | 27.3 | | 8.1 | 32.7 | | | 26.0 | 8.1 | | 8.4 | |
| Actuated g/C Ratio | 0.03 | 0.32 | | 0.09 | 0.38 | | | 0.30 | 0.09 | | 0.10 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 56 | 1104 | | 167 | 1343 | | | 549 | 149 | | 175 | |
| v/s Ratio Prot | 0.01 | c0.24 | | c0.05 | 0.22 | | | c0.07 | 0.01 | | c0.05 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.34 | 0.75 | | 0.57 | 0.57 | | | 0.21 | 0.06 | | 0.53 | |
| Uniform Delay, d1 | 40.7 | 26.2 | | 37.2 | 21.0 | | | 22.3 | 35.4 | | 36.8 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 3.6 | 3.0 | | 4.4 | 0.6 | | | 0.9 | 0.2 | | 2.8 | |
| Delay (s) | 44.3 | 29.2 | | 41.6 | 21.6 | | | 23.2 | 35.6 | | 39.6 | |
| Level of Service | D | C | | D | C | | | C | D | | D | |
| Approach Delay (s) | | 29.5 | | | 23.8 | | | 28.7 | | | 39.6 | |
| Approach LOS | | C | | | C | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 27.5 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.50 | | |
| Actuated Cycle Length (s) | 85.8 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 51.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | | | 1.00 | |
| Frt | 1.00 | 1.00 | | 1.00 | 1.00 | | | 0.97 | | | 0.90 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.96 | | | 0.99 | |
| Satd. Flow (prot) | 1770 | 3522 | | 1770 | 3529 | | | 1745 | | | 1661 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.96 | | | 0.99 | |
| Satd. Flow (perm) | 1770 | 3522 | | 1770 | 3529 | | | 1745 | | | 1661 | |
| Volume (vph) | 19 | 862 | 29 | 10 | 832 | 16 | 69 | 0 | 16 | 8 | 0 | 19 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 19 | 862 | 29 | 10 | 832 | 16 | 69 | 0 | 16 | 8 | 0 | 19 |
| RTOR Reduction (vph) | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 0 | 18 | 0 |
| Lane Group Flow (vph) | 19 | 890 | 0 | 10 | 847 | 0 | 0 | 77 | 0 | 0 | 9 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | | Split | | |
| Protected Phases | 5 | 2 | | 1 | 6 | | 8 | 8 | | 4 | 4 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 3.1 | 62.5 | | 1.5 | 60.9 | | | 9.6 | | | 4.1 | |
| Effective Green, g (s) | 3.1 | 62.5 | | 1.5 | 60.9 | | | 9.6 | | | 4.1 | |
| Actuated g/C Ratio | 0.03 | 0.67 | | 0.02 | 0.65 | | | 0.10 | | | 0.04 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | 59 | 2349 | | 28 | 2294 | | | 179 | | | 73 | |
| v/s Ratio Prot | c0.01 | c0.25 | | 0.01 | 0.24 | | | c0.04 | | | c0.01 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.32 | 0.38 | | 0.36 | 0.37 | | | 0.43 | | | 0.12 | |
| Uniform Delay, d1 | 44.3 | 7.0 | | 45.6 | 7.6 | | | 39.5 | | | 43.1 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | 3.2 | 0.5 | | 7.7 | 0.5 | | | 1.7 | | | 0.7 | |
| Delay (s) | 47.4 | 7.4 | | 53.3 | 8.0 | | | 41.1 | | | 43.8 | |
| Level of Service | D | A | | D | A | | | D | | | D | |
| Approach Delay (s) | | 8.3 | | | 8.5 | | | 41.1 | | | 43.8 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 10.4 | HCM Level of Service | B |
| HCM Volume to Capacity ratio | 0.36 | | |
| Actuated Cycle Length (s) | 93.7 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 42.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 0.95 | | 0.88 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (prot) | 3539 | 1583 | 1770 | 3539 | | 2787 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (perm) | 3539 | 1583 | 1770 | 3539 | | 2787 |
| Volume (vph) | 865 | 64 | 285 | 903 | 0 | 589 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 865 | 64 | 285 | 903 | 0 | 589 |
| RTOR Reduction (vph) | 0 | 21 | 0 | 0 | 0 | 371 |
| Lane Group Flow (vph) | 865 | 43 | 285 | 903 | 0 | 218 |
| Turn Type | | custom | Prot | | | custom |
| Protected Phases | 4 | 2 | 3 | 8 | | 2 |
| Permitted Phases | | 4 | | | | |
| Actuated Green, G (s) | 28.8 | 64.4 | 19.8 | 52.6 | | 35.6 |
| Effective Green, g (s) | 28.8 | 64.4 | 19.8 | 52.6 | | 35.6 |
| Actuated g/C Ratio | 0.30 | 0.67 | 0.21 | 0.55 | | 0.37 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 1059 | 1126 | 364 | 1935 | | 1031 |
| v/s Ratio Prot | c0.24 | 0.01 | c0.16 | 0.26 | | c0.08 |
| v/s Ratio Perm | | 0.01 | | | | |
| v/c Ratio | 0.82 | 0.04 | 0.78 | 0.47 | | 0.21 |
| Uniform Delay, d1 | 31.3 | 5.4 | 36.2 | 13.3 | | 20.7 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 5.0 | 0.0 | 10.5 | 0.2 | | 0.5 |
| Delay (s) | 36.2 | 5.4 | 46.7 | 13.4 | | 21.2 |
| Level of Service | D | A | D | B | | C |
| Approach Delay (s) | 34.1 | | | 21.4 | 21.2 | |
| Approach LOS | C | | | C | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 25.7 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.55 | | |
| Actuated Cycle Length (s) | 96.2 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 51.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.86 | 1.00 | 0.97 | 0.86 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 6408 | 1583 | 3433 | 6408 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 6408 | 1583 | 3433 | 6408 | 1583 |
| Volume (vph) | 594 | 676 | 215 | 371 | 649 | 186 | 258 | 1689 | 293 | 276 | 2148 | 416 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 594 | 676 | 215 | 371 | 649 | 186 | 258 | 1689 | 293 | 276 | 2148 | 416 |
| RTOR Reduction (vph) | 0 | 0 | 126 | 0 | 0 | 113 | 0 | 0 | 124 | 0 | 0 | 139 |
| Lane Group Flow (vph) | 594 | 676 | 89 | 371 | 649 | 73 | 258 | 1689 | 169 | 276 | 2148 | 277 |
| Turn Type | Prot | | Over | Prot | | Over | Prot | | Over | Prot | | Over |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 18.0 | 20.0 | 17.4 | 18.0 | 20.0 | 17.6 | 17.4 | 118.4 | 18.0 | 17.6 | 118.6 | 18.0 |
| Effective Green, g (s) | 18.0 | 20.0 | 17.4 | 18.0 | 20.0 | 17.6 | 17.4 | 118.4 | 18.0 | 17.6 | 118.6 | 18.0 |
| Actuated g/C Ratio | 0.09 | 0.11 | 0.09 | 0.09 | 0.11 | 0.09 | 0.09 | 0.62 | 0.09 | 0.09 | 0.62 | 0.09 |
| Clearance 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 |
| 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 | 3.0 |
| Lane Grp Cap (vph) | 325 | 373 | 145 | 325 | 373 | 147 | 314 | 3993 | 150 | 318 | 4000 | 150 |
| v/s Ratio Prot | 0.17 | c0.19 | 0.06 | 0.11 | 0.18 | 0.05 | 0.08 | 0.26 | 0.11 | c0.08 | c0.34 | c0.18 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 1.83 | 1.81 | 0.61 | 1.14 | 1.74 | 0.49 | 0.82 | 0.42 | 1.13 | 0.87 | 0.54 | 1.85 |
| Uniform Delay, d1 | 86.0 | 85.0 | 83.1 | 86.0 | 85.0 | 82.0 | 84.8 | 18.3 | 86.0 | 85.1 | 20.2 | 86.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.01 | 1.12 | 1.19 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 384.3 | 376.0 | 7.4 | 94.0 | 344.0 | 2.6 | 14.3 | 0.3 | 107.7 | 21.3 | 0.5 | 407.0 |
| Delay (s) | 470.3 | 461.0 | 90.5 | 180.0 | 429.0 | 84.6 | 99.9 | 20.8 | 210.2 | 106.3 | 20.7 | 493.0 |
| Level of Service | F | F | F | F | F | F | F | C | F | F | C | F |
| Approach Delay (s) | | 411.1 | | | 299.2 | | | 54.7 | | | 98.2 | |
| Approach LOS | | F | | | F | | | D | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 176.6 | HCM Level of Service | F |
| HCM Volume to Capacity ratio | 0.83 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 87.7% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 1.00 | | 1.00 | 0.97 | 0.86 | | 1.00 | 0.86 | 1.00 |
| Frt | 1.00 | | 0.85 | 1.00 | | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 6398 | | 1770 | 6408 | 1583 |
| Flt Permitted | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 6398 | | 1770 | 6408 | 1583 |
| Volume (vph) | 392 | 0 | 345 | 9 | 0 | 22 | 238 | 1885 | 20 | 22 | 2498 | 282 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 392 | 0 | 345 | 9 | 0 | 22 | 238 | 1885 | 20 | 22 | 2498 | 282 |
| RTOR Reduction (vph) | 0 | 0 | 313 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 34 |
| Lane Group Flow (vph) | 392 | 0 | 32 | 9 | 0 | 1 | 238 | 1905 | 0 | 22 | 2498 | 248 |
| Turn Type | custom | | Over | custom | | Over | Prot | | | Prot | | Perm |
| Protected Phases | | | 5 | | | 1 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 6 |
| Actuated Green, G (s) | 24.8 | | 17.6 | 24.8 | | 6.6 | 17.6 | 146.6 | | 6.6 | 135.6 | 135.6 |
| Effective Green, g (s) | 24.8 | | 17.6 | 24.8 | | 6.6 | 17.6 | 146.6 | | 6.6 | 135.6 | 135.6 |
| Actuated g/C Ratio | 0.13 | | 0.09 | 0.13 | | 0.03 | 0.09 | 0.77 | | 0.03 | 0.71 | 0.71 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 448 | | 147 | 231 | | 55 | 318 | 4937 | | 61 | 4573 | 1130 |
| v/s Ratio Prot | | | 0.02 | | | 0.00 | c0.07 | 0.30 | | 0.01 | c0.39 | |
| v/s Ratio Perm | c0.11 | | | 0.01 | | | | | | | | 0.16 |
| v/c Ratio | 0.88 | | 0.22 | 0.04 | | 0.01 | 0.75 | 0.39 | | 0.36 | 0.55 | 0.22 |
| Uniform Delay, d1 | 81.1 | | 79.8 | 72.2 | | 88.6 | 84.0 | 7.1 | | 89.6 | 12.8 | 9.2 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 0.94 | 0.74 | 0.75 |
| Incremental Delay, d2 | 17.1 | | 0.7 | 0.1 | | 0.1 | 9.3 | 0.2 | | 2.8 | 0.4 | 0.3 |
| Delay (s) | 98.2 | | 80.6 | 72.3 | | 88.7 | 93.3 | 7.3 | | 87.1 | 9.8 | 7.3 |
| Level of Service | F | | F | E | | F | F | A | | F | A | A |
| Approach Delay (s) | | 89.9 | | | 83.9 | | | 16.8 | | | 10.2 | |
| Approach LOS | | F | | | F | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 23.4 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.61 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 70.9% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Volume (veh/h) | 254 | 13 | 163 | 176 | 46 | 268 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 254 | 13 | 163 | 176 | 46 | 268 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | 692 |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 611 | 251 | | | 339 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 611 | 251 | | | 339 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 42 | 98 | | | 96 | |
| cM capacity (veh/h) | 440 | 788 | | | 1220 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 267 | 339 | 46 | 268 |
| Volume Left | 254 | 0 | 46 | 0 |
| Volume Right | 13 | 176 | 0 | 0 |
| cSH | 450 | 1700 | 1220 | 1700 |
| Volume to Capacity | 0.59 | 0.20 | 0.04 | 0.16 |
| Queue Length 95th (ft) | 94 | 0 | 3 | 0 |
| Control Delay (s) | 24.1 | 0.0 | 8.1 | 0.0 |
| Lane LOS | C | | A | |
| Approach Delay (s) | 24.1 | 0.0 | 1.2 | |
| Approach LOS | C | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 7.4 | | |
| Intersection Capacity Utilization | 47.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 9 | 193 | 3 | 1 | 235 | 25 | 4 | 4 | 0 | 27 | 7 | 2 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 9 | 193 | 3 | 1 | 235 | 25 | 4 | 4 | 0 | 27 | 7 | 2 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 205 | 261 | 8 | 36 |
| Volume Left (vph) | 9 | 1 | 4 | 27 |
| Volume Right (vph) | 3 | 25 | 0 | 2 |
| Hadj (s) | 0.03 | -0.02 | 0.13 | 0.15 |
| Departure Headway (s) | 4.3 | 4.2 | 5.1 | 5.1 |
| Degree Utilization, x | 0.25 | 0.30 | 0.01 | 0.05 |
| Capacity (veh/h) | 816 | 832 | 636 | 640 |
| Control Delay (s) | 8.7 | 9.0 | 8.2 | 8.4 |
| Approach Delay (s) | 8.7 | 9.0 | 8.2 | 8.4 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 8.8 | | |
| HCM Level of Service | A | | |
| Intersection Capacity Utilization | 26.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 3433 | 3464 | | 3433 | 3539 | 1583 | 3433 | 5009 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 3433 | 3464 | | 3433 | 3539 | 1583 | 3433 | 5009 | |
| Volume (vph) | 129 | 597 | 316 | 264 | 580 | 96 | 267 | 660 | 198 | 127 | 851 | 94 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 129 | 597 | 316 | 264 | 580 | 96 | 267 | 660 | 198 | 127 | 851 | 94 |
| RTOR Reduction (vph) | 0 | 0 | 276 | 0 | 11 | 0 | 0 | 0 | 185 | 0 | 11 | 0 |
| Lane Group Flow (vph) | 129 | 597 | 40 | 264 | 665 | 0 | 267 | 660 | 13 | 127 | 934 | 0 |
| Turn Type | Prot | | Over | Prot | | | Prot | | Over | Prot | | |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 13.0 | 32.0 | 13.9 | 7.0 | 26.0 | | 13.9 | 45.6 | 7.0 | 9.4 | 41.1 | |
| Effective Green, g (s) | 13.0 | 32.0 | 13.9 | 7.0 | 26.0 | | 13.9 | 45.6 | 7.0 | 9.4 | 41.1 | |
| Actuated g/C Ratio | 0.12 | 0.29 | 0.13 | 0.06 | 0.24 | | 0.13 | 0.41 | 0.06 | 0.09 | 0.37 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 209 | 1030 | 200 | 218 | 819 | | 434 | 1467 | 101 | 293 | 1872 | |
| v/s Ratio Prot | c0.07 | 0.17 | 0.03 | c0.08 | c0.19 | | c0.08 | 0.19 | 0.01 | 0.04 | c0.19 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.62 | 0.58 | 0.20 | 1.21 | 0.81 | | 0.62 | 0.45 | 0.12 | 0.43 | 0.50 | |
| Uniform Delay, d1 | 46.1 | 33.3 | 43.1 | 51.5 | 39.7 | | 45.5 | 23.2 | 48.6 | 47.8 | 26.5 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 5.3 | 0.8 | 0.5 | 129.7 | 6.1 | | 2.6 | 1.0 | 0.6 | 1.0 | 1.0 | |
| Delay (s) | 51.5 | 34.1 | 43.6 | 181.2 | 45.8 | | 48.1 | 24.2 | 49.2 | 48.8 | 27.5 | |
| Level of Service | D | C | D | F | D | | D | C | D | D | C | |
| Approach Delay (s) | | 39.1 | | | 83.8 | | | 34.3 | | | 30.0 | |
| Approach LOS | | D | | | F | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 45.5 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.65 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 65.7% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Volume (veh/h) | 17 | 791 | 861 | 25 | 15 | 12 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 17 | 791 | 861 | 25 | 15 | 12 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | 516 | | | |
| pX, platoon unblocked | 0.84 | | | | 0.84 | 0.84 |
| vC, conflicting volume | 886 | | | | 1290 | 430 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 675 | | | | 1156 | 133 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 98 | | | | 90 | 98 |
| cM capacity (veh/h) | 767 | | | | 156 | 749 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | SB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 17 | 396 | 396 | 430 | 430 | 25 | 27 |
| Volume Left | 17 | 0 | 0 | 0 | 0 | 0 | 15 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 25 | 12 |
| cSH | 767 | 1700 | 1700 | 1700 | 1700 | 1700 | 241 |
| Volume to Capacity | 0.02 | 0.23 | 0.23 | 0.25 | 0.25 | 0.01 | 0.11 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 0 | 0 | 9 |
| Control Delay (s) | 9.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 21.8 |
| Lane LOS | A | | | | | | C |
| Approach Delay (s) | 0.2 | | | 0.0 | | | 21.8 |
| Approach LOS | | | | | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 33.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 34 | 792 | 0 | 0 | 875 | 11 | 0 | 0 | 4 | 3 | 0 | 18 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 34 | 792 | 0 | 0 | 875 | 11 | 0 | 0 | 4 | 3 | 0 | 18 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 561 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.88 | | | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | |
| vC, conflicting volume | 886 | | | 792 | | | 1316 | 1746 | 396 | 1343 | 1735 | 438 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 886 | | | 629 | | | 1223 | 1712 | 180 | 1255 | 1699 | 438 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 96 | | | 100 | | | 100 | 100 | 99 | 97 | 100 | 97 |
| cM capacity (veh/h) | 760 | | | 836 | | | 111 | 75 | 733 | 109 | 77 | 567 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 34 | 396 | 396 | 438 | 438 | 11 | 4 | 21 |
| Volume Left | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 11 | 4 | 18 |
| cSH | 760 | 1700 | 1700 | 1700 | 1700 | 1700 | 733 | 354 |
| Volume to Capacity | 0.04 | 0.23 | 0.23 | 0.26 | 0.26 | 0.01 | 0.01 | 0.06 |
| Queue Length 95th (ft) | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Control Delay (s) | 10.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 9.9 | 15.8 |
| Lane LOS | A | | | | | | A | C |
| Approach Delay (s) | 0.4 | | | 0.0 | | | 9.9 | 15.8 |
| Approach LOS | | | | | | | A | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 38.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.97 | | 1.00 | 0.91 | | 1.00 | 0.92 | | 1.00 | 0.94 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3431 | | 1770 | 3230 | | 1770 | 1714 | | 1770 | 1750 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3431 | | 1770 | 3230 | | 1770 | 1714 | | 1770 | 1750 | |
| Volume (vph) | 59 | 141 | 36 | 97 | 119 | 166 | 43 | 105 | 120 | 232 | 155 | 105 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 59 | 141 | 36 | 97 | 119 | 166 | 43 | 105 | 120 | 232 | 155 | 105 |
| RTOR Reduction (vph) | 0 | 23 | 0 | 0 | 137 | 0 | 0 | 31 | 0 | 0 | 15 | 0 |
| Lane Group Flow (vph) | 59 | 154 | 0 | 97 | 148 | 0 | 43 | 194 | 0 | 232 | 245 | 0 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 5.3 | 11.4 | | 8.1 | 14.2 | | 4.7 | 30.5 | | 14.9 | 40.7 | |
| Effective Green, g (s) | 5.3 | 11.4 | | 8.1 | 14.2 | | 4.7 | 30.5 | | 14.9 | 40.7 | |
| Actuated g/C Ratio | 0.07 | 0.14 | | 0.10 | 0.18 | | 0.06 | 0.38 | | 0.18 | 0.50 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 116 | 483 | | 177 | 567 | | 103 | 646 | | 326 | 880 | |
| v/s Ratio Prot | 0.03 | 0.04 | | c0.05 | c0.05 | | 0.02 | 0.11 | | c0.13 | c0.14 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.51 | 0.32 | | 0.55 | 0.26 | | 0.42 | 0.30 | | 0.71 | 0.28 | |
| Uniform Delay, d1 | 36.5 | 31.3 | | 34.7 | 28.8 | | 36.8 | 17.7 | | 31.0 | 11.6 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 3.5 | 0.4 | | 3.4 | 0.2 | | 2.7 | 1.2 | | 7.2 | 0.8 | |
| Delay (s) | 40.0 | 31.6 | | 38.1 | 29.1 | | 39.5 | 18.9 | | 38.1 | 12.4 | |
| Level of Service | D | C | | D | C | | D | B | | D | B | |
| Approach Delay (s) | | 33.7 | | | 31.4 | | | 22.2 | | | 24.5 | |
| Approach LOS | | C | | | C | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 27.5 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.40 | | |
| Actuated Cycle Length (s) | 80.9 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 53.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | | | 1.00 | 0.85 | | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (prot) | 1770 | 3459 | | 1770 | 3529 | | | 1807 | 1583 | | 1763 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (perm) | 1770 | 3459 | | 1770 | 3529 | | | 1807 | 1583 | | 1763 | |
| Volume (vph) | 66 | 959 | 170 | 118 | 890 | 17 | 148 | 92 | 133 | 39 | 95 | 66 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 66 | 959 | 170 | 118 | 890 | 17 | 148 | 92 | 133 | 39 | 95 | 66 |
| RTOR Reduction (vph) | 0 | 12 | 0 | 0 | 1 | 0 | 0 | 0 | 117 | 0 | 18 | 0 |
| Lane Group Flow (vph) | 66 | 1117 | 0 | 118 | 906 | 0 | 0 | 240 | 16 | 0 | 182 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | Over | Split | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 7.6 | 27.1 | | 11.5 | 31.0 | | | 25.2 | 11.5 | | 15.1 | |
| Effective Green, g (s) | 7.6 | 27.1 | | 11.5 | 31.0 | | | 25.2 | 11.5 | | 15.1 | |
| Actuated g/C Ratio | 0.08 | 0.29 | | 0.12 | 0.33 | | | 0.27 | 0.12 | | 0.16 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 142 | 988 | | 214 | 1153 | | | 480 | 192 | | 281 | |
| v/s Ratio Prot | 0.04 | c0.32 | | c0.07 | c0.26 | | | c0.13 | 0.01 | | c0.10 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.46 | 1.13 | | 0.55 | 0.79 | | | 0.50 | 0.08 | | 0.65 | |
| Uniform Delay, d1 | 41.7 | 33.9 | | 39.3 | 28.9 | | | 29.5 | 37.0 | | 37.4 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 2.4 | 71.6 | | 3.1 | 3.6 | | | 3.7 | 0.2 | | 5.1 | |
| Delay (s) | 44.1 | 105.5 | | 42.3 | 32.5 | | | 33.2 | 37.2 | | 42.5 | |
| Level of Service | D | F | | D | C | | | C | D | | D | |
| Approach Delay (s) | | 102.1 | | | 33.7 | | | 34.6 | | | 42.5 | |
| Approach LOS | | F | | | C | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 63.7 | HCM Level of Service | E |
| HCM Volume to Capacity ratio | 0.79 | | |
| Actuated Cycle Length (s) | 94.9 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 76.0% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | | | 1.00 | |
| Frt | 1.00 | 1.00 | | 1.00 | 0.99 | | | 0.97 | | | 0.94 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.96 | | | 0.97 | |
| Satd. Flow (prot) | 1770 | 3532 | | 1770 | 3519 | | | 1744 | | | 1699 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.96 | | | 0.97 | |
| Satd. Flow (perm) | 1770 | 3532 | | 1770 | 3519 | | | 1744 | | | 1699 | |
| Volume (vph) | 69 | 1169 | 16 | 16 | 1012 | 40 | 44 | 3 | 13 | 21 | 0 | 19 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 69 | 1169 | 16 | 16 | 1012 | 40 | 44 | 3 | 13 | 21 | 0 | 19 |
| RTOR Reduction (vph) | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 10 | 0 | 0 | 18 | 0 |
| Lane Group Flow (vph) | 69 | 1184 | 0 | 16 | 1050 | 0 | 0 | 50 | 0 | 0 | 22 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | | Split | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 7.9 | 67.9 | | 3.1 | 63.1 | | | 8.8 | | | 6.3 | |
| Effective Green, g (s) | 7.9 | 67.9 | | 3.1 | 63.1 | | | 8.8 | | | 6.3 | |
| Actuated g/C Ratio | 0.08 | 0.67 | | 0.03 | 0.62 | | | 0.09 | | | 0.06 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | 137 | 2349 | | 54 | 2175 | | | 150 | | | 105 | |
| v/s Ratio Prot | c0.04 | c0.34 | | 0.01 | 0.30 | | | c0.03 | | | c0.01 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.50 | 0.50 | | 0.30 | 0.48 | | | 0.33 | | | 0.21 | |
| Uniform Delay, d1 | 45.2 | 8.6 | | 48.4 | 10.6 | | | 43.9 | | | 45.5 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | 2.9 | 0.8 | | 3.1 | 0.8 | | | 1.3 | | | 1.0 | |
| Delay (s) | 48.1 | 9.4 | | 51.5 | 11.4 | | | 45.2 | | | 46.5 | |
| Level of Service | D | A | | D | B | | | D | | | D | |
| Approach Delay (s) | | 11.5 | | | 12.0 | | | 45.2 | | | 46.5 | |
| Approach LOS | | B | | | B | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 13.1 | HCM Level of Service | B |
| HCM Volume to Capacity ratio | 0.46 | | |
| Actuated Cycle Length (s) | 102.1 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 57.0% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 0.95 | | 0.88 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (prot) | 3539 | 1583 | 1770 | 3539 | | 2787 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (perm) | 3539 | 1583 | 1770 | 3539 | | 2787 |
| Volume (vph) | 1176 | 34 | 170 | 1148 | 0 | 691 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 1176 | 34 | 170 | 1148 | 0 | 691 |
| RTOR Reduction (vph) | 0 | 19 | 0 | 0 | 0 | 443 |
| Lane Group Flow (vph) | 1176 | 15 | 170 | 1148 | 0 | 248 |
| Turn Type | | custom | Prot | | | custom |
| Protected Phases | 4 | 2 | 3 | 8 | | 2 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 36.1 | 35.1 | 14.5 | 54.6 | | 35.1 |
| Effective Green, g (s) | 36.1 | 35.1 | 14.5 | 54.6 | | 35.1 |
| Actuated g/C Ratio | 0.37 | 0.36 | 0.15 | 0.56 | | 0.36 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 1308 | 569 | 263 | 1978 | | 1001 |
| v/s Ratio Prot | c0.33 | 0.01 | c0.10 | 0.32 | | c0.09 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.90 | 0.03 | 0.65 | 0.58 | | 0.25 |
| Uniform Delay, d1 | 29.1 | 20.3 | 39.2 | 14.1 | | 22.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 8.5 | 0.1 | 5.4 | 0.4 | | 0.6 |
| Delay (s) | 37.6 | 20.3 | 44.6 | 14.5 | | 22.6 |
| Level of Service | D | C | D | B | | C |
| Approach Delay (s) | 37.1 | | | 18.4 | 22.6 | |
| Approach LOS | D | | | B | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 26.3 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.59 | | |
| Actuated Cycle Length (s) | 97.7 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 63.3% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | 1.00 | 0.97 | 0.91 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 5085 | 1583 | 3433 | 5085 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 5085 | 1583 | 3433 | 5085 | 1583 |
| Volume (vph) | 693 | 937 | 316 | 408 | 663 | 115 | 180 | 1785 | 380 | 297 | 3556 | 313 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor (vph) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 85% | 100% | 100% | 85% | 100% |
| Adj. Flow (vph) | 693 | 937 | 316 | 408 | 663 | 115 | 180 | 1517 | 380 | 297 | 3023 | 313 |
| RTOR Reduction (vph) | 0 | 0 | 128 | 0 | 0 | 69 | 0 | 0 | 142 | 0 | 0 | 59 |
| Lane Group Flow (vph) | 693 | 937 | 188 | 408 | 663 | 46 | 180 | 1517 | 238 | 297 | 3023 | 254 |
| Turn Type | Prot | | Over | Prot | | Over | Prot | | Over | Prot | | Over |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 18.0 | 20.0 | 18.0 | 18.0 | 20.0 | 18.0 | 18.0 | 118.0 | 18.0 | 18.0 | 118.0 | 18.0 |
| Effective Green, g (s) | 18.0 | 20.0 | 18.0 | 18.0 | 20.0 | 18.0 | 18.0 | 118.0 | 18.0 | 18.0 | 118.0 | 18.0 |
| Actuated g/C Ratio | 0.09 | 0.11 | 0.09 | 0.09 | 0.11 | 0.09 | 0.09 | 0.62 | 0.09 | 0.09 | 0.62 | 0.09 |
| Clearance 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 |
| 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 | 3.0 |
| Lane Grp Cap (vph) | 325 | 373 | 150 | 325 | 373 | 150 | 325 | 3158 | 150 | 325 | 3158 | 150 |
| v/s Ratio Prot | c0.20 | c0.26 | c0.12 | 0.12 | 0.19 | 0.03 | 0.05 | 0.30 | 0.15 | 0.09 | c0.59 | 0.16 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 2.13 | 2.51 | 1.26 | 1.26 | 1.78 | 0.31 | 0.55 | 0.48 | 1.59 | 0.91 | 0.96 | 1.69 |
| Uniform Delay, d1 | 86.0 | 85.0 | 86.0 | 86.0 | 85.0 | 80.2 | 82.2 | 19.4 | 86.0 | 85.2 | 33.6 | 86.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.09 | 1.21 | 1.25 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 519.8 | 688.4 | 158.0 | 137.7 | 360.6 | 1.2 | 1.8 | 0.5 | 289.2 | 28.8 | 8.8 | 339.4 |
| Delay (s) | 605.8 | 773.4 | 244.0 | 223.7 | 445.6 | 81.4 | 91.6 | 23.9 | 396.9 | 114.1 | 42.4 | 425.4 |
| Level of Service | F | F | F | F | F | F | F | C | F | F | D | F |
| Approach Delay (s) | | 627.7 | | | 333.9 | | | 98.0 | | | 81.3 | |
| Approach LOS | | F | | | F | | | F | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 239.4 | HCM Level of Service | F |
| HCM Volume to Capacity ratio | 1.29 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 150.6% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 1.00 | | 1.00 | 0.97 | 0.91 | | 1.00 | 0.91 | 1.00 |
| Frt | 1.00 | | 0.85 | 1.00 | | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 5081 | | 1770 | 5085 | 1583 |
| Flt Permitted | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 5081 | | 1770 | 5085 | 1583 |
| Volume (vph) | 505 | 0 | 265 | 9 | 0 | 10 | 93 | 1805 | 8 | 36 | 3978 | 122 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor (vph) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 85% | 100% | 100% | 85% | 100% |
| Adj. Flow (vph) | 505 | 0 | 265 | 9 | 0 | 10 | 93 | 1534 | 8 | 36 | 3381 | 122 |
| RTOR Reduction (vph) | 0 | 0 | 250 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 8 |
| Lane Group Flow (vph) | 505 | 0 | 15 | 9 | 0 | 0 | 93 | 1542 | 0 | 36 | 3381 | 114 |
| Turn Type | custom | | Over | custom | | Over | Prot | | | Prot | | Perm |
| Protected Phases | | | 5 | | | 1 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 6 |
| Actuated Green, G (s) | 31.0 | | 10.8 | 31.0 | | 7.9 | 10.8 | 139.1 | | 7.9 | 136.2 | 136.2 |
| Effective Green, g (s) | 31.0 | | 10.8 | 31.0 | | 7.9 | 10.8 | 139.1 | | 7.9 | 136.2 | 136.2 |
| Actuated g/C Ratio | 0.16 | | 0.06 | 0.16 | | 0.04 | 0.06 | 0.73 | | 0.04 | 0.72 | 0.72 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 560 | | 90 | 289 | | 66 | 195 | 3720 | | 74 | 3645 | 1135 |
| v/s Ratio Prot | | | 0.01 | | | 0.00 | c0.03 | c0.30 | | 0.02 | c0.66 | |
| v/s Ratio Perm | c0.15 | | | 0.01 | | | | | | | | 0.07 |
| v/c Ratio | 0.90 | | 0.17 | 0.03 | | 0.01 | 0.48 | 0.41 | | 0.49 | 0.93 | 0.10 |
| Uniform Delay, d1 | 78.0 | | 85.3 | 66.9 | | 87.3 | 86.9 | 9.8 | | 89.1 | 22.7 | 8.2 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 0.84 | 0.69 | 1.16 |
| Incremental Delay, d2 | 17.7 | | 0.9 | 0.0 | | 0.0 | 1.8 | 0.3 | | 0.5 | 0.6 | 0.0 |
| Delay (s) | 95.7 | | 86.2 | 66.9 | | 87.3 | 88.7 | 10.1 | | 74.9 | 16.3 | 9.5 |
| Level of Service | F | | F | E | | F | F | B | | E | B | A |
| Approach Delay (s) | | 92.4 | | | 77.7 | | | 14.6 | | | 16.7 | |
| Approach LOS | | F | | | E | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 26.1 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.91 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 95.1% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Volume (veh/h) | 251 | 52 | 285 | 81 | 20 | 484 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 251 | 52 | 285 | 81 | 20 | 484 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | 692 |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 850 | 326 | | | 366 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 850 | 326 | | | 366 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 23 | 93 | | | 98 | |
| cM capacity (veh/h) | 326 | 716 | | | 1193 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 303 | 366 | 20 | 484 |
| Volume Left | 251 | 0 | 20 | 0 |
| Volume Right | 52 | 81 | 0 | 0 |
| cSH | 359 | 1700 | 1193 | 1700 |
| Volume to Capacity | 0.84 | 0.22 | 0.02 | 0.28 |
| Queue Length 95th (ft) | 193 | 0 | 1 | 0 |
| Control Delay (s) | 50.9 | 0.0 | 8.1 | 0.0 |
| Lane LOS | F | | A | |
| Approach Delay (s) | 50.9 | 0.0 | 0.3 | |
| Approach LOS | F | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 13.3 | | |
| Intersection Capacity Utilization | 49.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 10 | 91 | 0 | 0 | 236 | 36 | 8 | 12 | 0 | 14 | 1 | 6 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 10 | 91 | 0 | 0 | 236 | 36 | 8 | 12 | 0 | 14 | 1 | 6 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 101 | 272 | 20 | 21 |
| Volume Left (vph) | 10 | 0 | 8 | 14 |
| Volume Right (vph) | 0 | 36 | 0 | 6 |
| Hadj (s) | 0.05 | -0.05 | 0.11 | 0.00 |
| Departure Headway (s) | 4.3 | 4.1 | 4.8 | 4.7 |
| Degree Utilization, x | 0.12 | 0.31 | 0.03 | 0.03 |
| Capacity (veh/h) | 813 | 874 | 683 | 695 |
| Control Delay (s) | 7.9 | 8.9 | 8.0 | 7.9 |
| Approach Delay (s) | 7.9 | 8.9 | 8.0 | 7.9 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 8.5 | | |
| HCM Level of Service | A | | |
| Intersection Capacity Utilization | 24.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 3433 | 3472 | | 3433 | 3539 | 1583 | 3433 | 5019 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 3433 | 3472 | | 3433 | 3539 | 1583 | 3433 | 5019 | |
| Volume (vph) | 170 | 816 | 352 | 394 | 825 | 120 | 346 | 683 | 206 | 193 | 1207 | 114 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 170 | 816 | 352 | 394 | 825 | 120 | 346 | 683 | 206 | 193 | 1207 | 114 |
| RTOR Reduction (vph) | 0 | 0 | 301 | 0 | 10 | 0 | 0 | 0 | 193 | 0 | 10 | 0 |
| Lane Group Flow (vph) | 170 | 816 | 51 | 394 | 935 | 0 | 346 | 683 | 13 | 193 | 1311 | 0 |
| Turn Type | Prot | | Over | Prot | | | Prot | | Over | Prot | | |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 15.2 | 32.0 | 15.8 | 7.0 | 23.8 | | 15.8 | 44.3 | 7.0 | 10.7 | 39.2 | |
| Effective Green, g (s) | 15.2 | 32.0 | 15.8 | 7.0 | 23.8 | | 15.8 | 44.3 | 7.0 | 10.7 | 39.2 | |
| Actuated g/C Ratio | 0.14 | 0.29 | 0.14 | 0.06 | 0.22 | | 0.14 | 0.40 | 0.06 | 0.10 | 0.36 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 245 | 1030 | 227 | 218 | 751 | | 493 | 1425 | 101 | 334 | 1789 | |
| v/s Ratio Prot | c0.10 | 0.23 | 0.03 | c0.11 | c0.27 | | c0.10 | 0.19 | 0.01 | 0.06 | c0.26 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.69 | 0.79 | 0.22 | 1.81 | 1.24 | | 0.70 | 0.48 | 0.13 | 0.58 | 0.73 | |
| Uniform Delay, d1 | 45.2 | 35.9 | 41.7 | 51.5 | 43.1 | | 44.9 | 24.3 | 48.6 | 47.5 | 30.8 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 8.2 | 4.2 | 0.5 | 380.9 | 121.2 | | 4.5 | 1.2 | 0.6 | 2.4 | 2.7 | |
| Delay (s) | 53.4 | 40.2 | 42.2 | 432.4 | 164.3 | | 49.3 | 25.5 | 49.2 | 49.9 | 33.5 | |
| Level of Service | D | D | D | F | F | | D | C | D | D | C | |
| Approach Delay (s) | | 42.4 | | | 243.2 | | | 36.1 | | | 35.6 | |
| Approach LOS | | D | | | F | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 88.6 | HCM Level of Service | F |
| HCM Volume to Capacity ratio | 0.92 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 85.1% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Volume (veh/h) | 56 | 1185 | 1026 | 25 | 7 | 21 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 56 | 1185 | 1026 | 25 | 7 | 21 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | 516 | | | |
| pX, platoon unblocked | 0.78 | | | | 0.78 | 0.78 |
| vC, conflicting volume | 1051 | | | | 1730 | 513 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 782 | | | | 1654 | 92 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 91 | | | | 89 | 97 |
| cM capacity (veh/h) | 648 | | | | 63 | 738 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | SB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 56 | 592 | 592 | 513 | 513 | 25 | 28 |
| Volume Left | 56 | 0 | 0 | 0 | 0 | 0 | 7 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 25 | 21 |
| cSH | 648 | 1700 | 1700 | 1700 | 1700 | 1700 | 202 |
| Volume to Capacity | 0.09 | 0.35 | 0.35 | 0.30 | 0.30 | 0.01 | 0.14 |
| Queue Length 95th (ft) | 7 | 0 | 0 | 0 | 0 | 0 | 12 |
| Control Delay (s) | 11.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 25.7 |
| Lane LOS | B | | | | | | D |
| Approach Delay (s) | 0.5 | | | 0.0 | | | 25.7 |
| Approach LOS | | | | | | | D |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.6 | | |
| Intersection Capacity Utilization | 45.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 47 | 1174 | 0 | 0 | 1085 | 16 | 0 | 0 | 38 | 3 | 0 | 38 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 47 | 1174 | 0 | 0 | 1085 | 16 | 0 | 0 | 38 | 3 | 0 | 38 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 561 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.79 | | | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | |
| vC, conflicting volume | 1101 | | | 1174 | | | 1848 | 2369 | 587 | 1804 | 2353 | 542 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1101 | | | 958 | | | 1809 | 2465 | 218 | 1753 | 2445 | 542 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 93 | | | 100 | | | 100 | 100 | 94 | 92 | 100 | 92 |
| cM capacity (veh/h) | 630 | | | 566 | | | 34 | 22 | 623 | 38 | 23 | 484 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 47 | 587 | 587 | 542 | 542 | 16 | 38 | 41 |
| Volume Left | 47 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 16 | 38 | 38 |
| cSH | 630 | 1700 | 1700 | 1700 | 1700 | 1700 | 623 | 261 |
| Volume to Capacity | 0.07 | 0.35 | 0.35 | 0.32 | 0.32 | 0.01 | 0.06 | 0.16 |
| Queue Length 95th (ft) | 6 | 0 | 0 | 0 | 0 | 0 | 5 | 14 |
| Control Delay (s) | 11.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 11.2 | 21.3 |
| Lane LOS | B | | | | | | B | C |
| Approach Delay (s) | 0.4 | | | 0.0 | | | 11.2 | 21.3 |
| Approach LOS | | | | | | | B | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.8 | | |
| Intersection Capacity Utilization | 49.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.97 | | 1.00 | 0.93 | | 1.00 | 0.92 | | 1.00 | 0.95 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3419 | | 1770 | 3297 | | 1770 | 1711 | | 1770 | 1776 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3419 | | 1770 | 3297 | | 1770 | 1711 | | 1770 | 1776 | |
| Volume (vph) | 43 | 279 | 82 | 94 | 123 | 103 | 77 | 173 | 205 | 286 | 351 | 159 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 43 | 279 | 82 | 94 | 123 | 103 | 77 | 173 | 205 | 286 | 351 | 159 |
| RTOR Reduction (vph) | 0 | 26 | 0 | 0 | 82 | 0 | 0 | 35 | 0 | 0 | 12 | 0 |
| Lane Group Flow (vph) | 43 | 335 | 0 | 94 | 144 | 0 | 77 | 343 | 0 | 286 | 498 | 0 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 5.0 | 15.5 | | 8.7 | 19.2 | | 7.9 | 37.1 | | 18.6 | 47.8 | |
| Effective Green, g (s) | 5.0 | 15.5 | | 8.7 | 19.2 | | 7.9 | 37.1 | | 18.6 | 47.8 | |
| Actuated g/C Ratio | 0.05 | 0.16 | | 0.09 | 0.20 | | 0.08 | 0.39 | | 0.19 | 0.50 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 92 | 553 | | 161 | 660 | | 146 | 662 | | 343 | 885 | |
| v/s Ratio Prot | 0.02 | c0.10 | | c0.05 | c0.04 | | 0.04 | 0.20 | | c0.16 | c0.28 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.47 | 0.61 | | 0.58 | 0.22 | | 0.53 | 0.52 | | 0.83 | 0.56 | |
| Uniform Delay, d1 | 44.2 | 37.4 | | 41.9 | 32.1 | | 42.2 | 22.5 | | 37.2 | 16.8 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 3.7 | 1.9 | | 5.3 | 0.2 | | 3.4 | 2.9 | | 15.8 | 2.6 | |
| Delay (s) | 47.9 | 39.2 | | 47.2 | 32.2 | | 45.6 | 25.4 | | 53.0 | 19.3 | |
| Level of Service | D | D | | D | C | | D | C | | D | B | |
| Approach Delay (s) | | 40.2 | | | 36.6 | | | 28.8 | | | 31.4 | |
| Approach LOS | | D | | | D | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 33.5 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.64 | | |
| Actuated Cycle Length (s) | 95.9 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 67.0% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | | | 1.00 | 0.85 | | 0.95 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (prot) | 1770 | 3451 | | 1770 | 3532 | | | 1814 | 1583 | | 1747 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (perm) | 1770 | 3451 | | 1770 | 3532 | | | 1814 | 1583 | | 1747 | |
| Volume (vph) | 30 | 805 | 160 | 137 | 761 | 11 | 99 | 84 | 107 | 30 | 54 | 52 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 30 | 805 | 160 | 137 | 761 | 11 | 99 | 84 | 107 | 30 | 54 | 52 |
| RTOR Reduction (vph) | 0 | 14 | 0 | 0 | 1 | 0 | 0 | 0 | 93 | 0 | 23 | 0 |
| Lane Group Flow (vph) | 30 | 951 | 0 | 137 | 771 | 0 | 0 | 183 | 14 | 0 | 113 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | Over | Split | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 4.6 | 27.7 | | 12.1 | 35.2 | | | 25.1 | 12.1 | | 12.1 | |
| Effective Green, g (s) | 4.6 | 27.7 | | 12.1 | 35.2 | | | 25.1 | 12.1 | | 12.1 | |
| Actuated g/C Ratio | 0.05 | 0.30 | | 0.13 | 0.38 | | | 0.27 | 0.13 | | 0.13 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 88 | 1028 | | 230 | 1337 | | | 490 | 206 | | 227 | |
| v/s Ratio Prot | 0.02 | c0.28 | | c0.08 | 0.22 | | | c0.10 | 0.01 | | c0.06 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.34 | 0.93 | | 0.60 | 0.58 | | | 0.37 | 0.07 | | 0.50 | |
| Uniform Delay, d1 | 42.7 | 31.6 | | 38.1 | 23.0 | | | 27.6 | 35.5 | | 37.6 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 2.3 | 13.5 | | 4.1 | 0.6 | | | 2.2 | 0.1 | | 1.7 | |
| Delay (s) | 45.0 | 45.1 | | 42.2 | 23.6 | | | 29.7 | 35.6 | | 39.3 | |
| Level of Service | D | D | | D | C | | | C | D | | D | |
| Approach Delay (s) | | 45.1 | | | 26.4 | | | 31.9 | | | 39.3 | |
| Approach LOS | | D | | | C | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 35.8 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.63 | | |
| Actuated Cycle Length (s) | 93.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 61.5% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | | | 1.00 | |
| Frt | 1.00 | 0.99 | | 1.00 | 0.99 | | | 0.97 | | | 0.93 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.96 | | | 0.98 | |
| Satd. Flow (prot) | 1770 | 3508 | | 1770 | 3520 | | | 1735 | | | 1692 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.96 | | | 0.98 | |
| Satd. Flow (perm) | 1770 | 3508 | | 1770 | 3520 | | | 1735 | | | 1692 | |
| Volume (vph) | 39 | 898 | 57 | 39 | 895 | 34 | 18 | 0 | 6 | 24 | 1 | 28 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 39 | 898 | 57 | 39 | 895 | 34 | 18 | 0 | 6 | 24 | 1 | 28 |
| RTOR Reduction (vph) | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 6 | 0 | 0 | 26 | 0 |
| Lane Group Flow (vph) | 39 | 953 | 0 | 39 | 928 | 0 | 0 | 18 | 0 | 0 | 27 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | | Split | | |
| Protected Phases | 5 | 2 | | 1 | 6 | | 8 | 8 | | 4 | 4 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 5.4 | 63.4 | | 5.4 | 63.4 | | | 4.1 | | | 6.5 | |
| Effective Green, g (s) | 5.4 | 63.4 | | 5.4 | 63.4 | | | 4.1 | | | 6.5 | |
| Actuated g/C Ratio | 0.06 | 0.66 | | 0.06 | 0.66 | | | 0.04 | | | 0.07 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | 100 | 2331 | | 100 | 2339 | | | 75 | | | 115 | |
| v/s Ratio Prot | c0.02 | c0.27 | | 0.02 | 0.26 | | | c0.01 | | | c0.02 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.39 | 0.41 | | 0.39 | 0.40 | | | 0.24 | | | 0.23 | |
| Uniform Delay, d1 | 43.4 | 7.4 | | 43.4 | 7.3 | | | 44.2 | | | 42.1 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | 2.5 | 0.5 | | 2.5 | 0.5 | | | 1.7 | | | 1.0 | |
| Delay (s) | 45.9 | 7.9 | | 45.9 | 7.8 | | | 45.8 | | | 43.1 | |
| Level of Service | D | A | | D | A | | | D | | | D | |
| Approach Delay (s) | | 9.4 | | | 9.3 | | | 45.8 | | | 43.1 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 10.7 | HCM Level of Service | B |
| HCM Volume to Capacity ratio | 0.38 | | |
| Actuated Cycle Length (s) | 95.4 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 47.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 0.89 | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | 0.99 | 1.00 |
| Satd. Flow (prot) | 3539 | 1583 | 1770 | 3539 | 1636 | 1504 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | 0.99 | 1.00 |
| Satd. Flow (perm) | 3539 | 1583 | 1770 | 3539 | 1636 | 1504 |
| Volume (vph) | 834 | 124 | 363 | 978 | 23 | 140 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 834 | 124 | 363 | 978 | 23 | 140 |
| RTOR Reduction (vph) | 0 | 80 | 0 | 0 | 41 | 49 |
| Lane Group Flow (vph) | 834 | 44 | 363 | 978 | 46 | 27 |
| Turn Type | | Over | Prot | | | Prot |
| Protected Phases | 4 | 2 | 3 | 8 | 2 | 2 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 28.8 | 35.5 | 23.5 | 56.3 | 35.5 | 35.5 |
| Effective Green, g (s) | 28.8 | 35.5 | 23.5 | 56.3 | 35.5 | 35.5 |
| Actuated g/C Ratio | 0.29 | 0.36 | 0.24 | 0.56 | 0.36 | 0.36 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 1021 | 563 | 417 | 1996 | 582 | 535 |
| v/s Ratio Prot | c0.24 | 0.03 | c0.21 | 0.28 | c0.03 | 0.02 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.82 | 0.08 | 0.87 | 0.49 | 0.08 | 0.05 |
| Uniform Delay, d1 | 33.0 | 21.3 | 36.7 | 13.1 | 21.3 | 21.1 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 5.2 | 0.3 | 17.6 | 0.2 | 0.3 | 0.2 |
| Delay (s) | 38.2 | 21.6 | 54.3 | 13.3 | 21.6 | 21.3 |
| Level of Service | D | C | D | B | C | C |
| Approach Delay (s) | 36.0 | | | 24.4 | 21.4 | |
| Approach LOS | D | | | C | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 28.7 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.53 | | |
| Actuated Cycle Length (s) | 99.8 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 61.5% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | 1.00 | 0.97 | 0.91 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 5085 | 1583 | 3433 | 5085 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 5085 | 1583 | 3433 | 5085 | 1583 |
| Volume (vph) | 387 | 421 | 127 | 361 | 726 | 254 | 192 | 3340 | 223 | 137 | 1596 | 322 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor (vph) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 85% | 100% | 100% | 85% | 100% |
| Adj. Flow (vph) | 387 | 421 | 127 | 361 | 726 | 254 | 192 | 2839 | 223 | 137 | 1357 | 322 |
| RTOR Reduction (vph) | 0 | 0 | 118 | 0 | 0 | 141 | 0 | 0 | 44 | 0 | 0 | 135 |
| Lane Group Flow (vph) | 387 | 421 | 9 | 361 | 726 | 113 | 192 | 2839 | 179 | 137 | 1357 | 187 |
| Turn Type | Prot | | Over | Prot | | Over | Prot | | Over | Prot | | Over |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 17.0 | 24.0 | 13.6 | 21.0 | 28.0 | 16.5 | 13.6 | 112.5 | 21.0 | 16.5 | 115.4 | 17.0 |
| Effective Green, g (s) | 17.0 | 24.0 | 13.6 | 21.0 | 28.0 | 16.5 | 13.6 | 112.5 | 21.0 | 16.5 | 115.4 | 17.0 |
| Actuated g/C Ratio | 0.09 | 0.13 | 0.07 | 0.11 | 0.15 | 0.09 | 0.07 | 0.59 | 0.11 | 0.09 | 0.61 | 0.09 |
| Clearance 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 |
| 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 | 3.0 |
| Lane Grp Cap (vph) | 307 | 447 | 113 | 379 | 522 | 137 | 246 | 3011 | 175 | 298 | 3088 | 142 |
| v/s Ratio Prot | 0.11 | 0.12 | 0.01 | 0.11 | c0.21 | c0.07 | 0.06 | c0.56 | 0.11 | 0.04 | c0.27 | c0.12 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 1.26 | 0.94 | 0.08 | 0.95 | 1.39 | 0.83 | 0.78 | 0.94 | 1.02 | 0.46 | 0.44 | 1.32 |
| Uniform Delay, d1 | 86.5 | 82.3 | 82.4 | 84.0 | 81.0 | 85.4 | 86.7 | 35.8 | 84.5 | 82.5 | 20.0 | 86.5 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.94 | 1.21 | 1.13 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 140.9 | 28.3 | 0.3 | 33.9 | 187.4 | 31.8 | 11.5 | 6.0 | 64.5 | 1.1 | 0.5 | 184.2 |
| Delay (s) | 227.4 | 110.6 | 82.7 | 117.9 | 268.4 | 117.2 | 93.4 | 49.3 | 160.1 | 83.6 | 20.4 | 270.7 |
| Level of Service | F | F | F | F | F | F | F | D | F | F | C | F |
| Approach Delay (s) | | 155.1 | | | 199.2 | | | 59.5 | | | 69.6 | |
| Approach LOS | | F | | | F | | | E | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 99.7 | HCM Level of Service | F |
| HCM Volume to Capacity ratio | 1.06 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 107.6% | ICU Level of Service | G |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 1.00 | | 1.00 | 0.97 | 0.91 | | 1.00 | 0.91 | 1.00 |
| Frt | 1.00 | | 0.85 | 1.00 | | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 5083 | | 1770 | 5085 | 1583 |
| Flt Permitted | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 5083 | | 1770 | 5085 | 1583 |
| Volume (vph) | 148 | 0 | 69 | 13 | 0 | 13 | 276 | 3475 | 9 | 11 | 1757 | 408 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor (vph) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 85% | 100% | 100% | 85% | 100% |
| Adj. Flow (vph) | 148 | 0 | 69 | 13 | 0 | 13 | 276 | 2954 | 9 | 11 | 1493 | 408 |
| RTOR Reduction (vph) | 0 | 0 | 62 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 53 |
| Lane Group Flow (vph) | 148 | 0 | 7 | 13 | 0 | 0 | 276 | 2963 | 0 | 11 | 1493 | 355 |
| Turn Type | custom | | Over | custom | | Over | Prot | | | Prot | | Perm |
| Protected Phases | | | 5 | | | 1 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 6 |
| Actuated Green, G (s) | 12.6 | | 19.2 | 12.6 | | 4.4 | 19.2 | 161.0 | | 4.4 | 146.2 | 146.2 |
| Effective Green, g (s) | 12.6 | | 19.2 | 12.6 | | 4.4 | 19.2 | 161.0 | | 4.4 | 146.2 | 146.2 |
| Actuated g/C Ratio | 0.07 | | 0.10 | 0.07 | | 0.02 | 0.10 | 0.85 | | 0.02 | 0.77 | 0.77 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 228 | | 160 | 117 | | 37 | 347 | 4307 | | 41 | 3913 | 1218 |
| v/s Ratio Prot | | | 0.00 | | | 0.00 | c0.08 | c0.58 | | 0.01 | 0.29 | |
| v/s Ratio Perm | c0.04 | | | 0.01 | | | | | | | | 0.22 |
| v/c Ratio | 0.65 | | 0.04 | 0.11 | | 0.01 | 0.80 | 0.69 | | 0.27 | 0.38 | 0.29 |
| Uniform Delay, d1 | 86.5 | | 77.1 | 83.4 | | 90.7 | 83.5 | 5.3 | | 91.2 | 7.1 | 6.5 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 0.95 | 0.74 | 0.53 |
| Incremental Delay, d2 | 6.2 | | 0.1 | 0.4 | | 0.1 | 11.9 | 0.9 | | 3.0 | 0.2 | 0.5 |
| Delay (s) | 92.8 | | 77.2 | 83.9 | | 90.8 | 95.4 | 6.2 | | 89.3 | 5.5 | 4.0 |
| Level of Service | F | | E | F | | F | F | A | | F | A | A |
| Approach Delay (s) | | 87.8 | | | 87.3 | | | 13.8 | | | 5.7 | |
| Approach LOS | | F | | | F | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 14.3 | HCM Level of Service | B |
| HCM Volume to Capacity ratio | 0.69 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 81.4% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Volume (veh/h) | 35 | 3 | 427 | 253 | 80 | 228 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 35 | 3 | 427 | 253 | 80 | 228 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | 692 |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 942 | 554 | | | 680 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 942 | 554 | | | 680 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 87 | 99 | | | 91 | |
| cM capacity (veh/h) | 266 | 532 | | | 912 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 38 | 680 | 80 | 228 |
| Volume Left | 35 | 0 | 80 | 0 |
| Volume Right | 3 | 253 | 0 | 0 |
| cSH | 277 | 1700 | 912 | 1700 |
| Volume to Capacity | 0.14 | 0.40 | 0.09 | 0.13 |
| Queue Length 95th (ft) | 12 | 0 | 7 | 0 |
| Control Delay (s) | 20.0 | 0.0 | 9.3 | 0.0 |
| Lane LOS | C | | A | |
| Approach Delay (s) | 20.0 | 0.0 | 2.4 | |
| Approach LOS | C | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 1.5 | | |
| Intersection Capacity Utilization | 55.7% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 2 | 250 | 18 | 1 | 44 | 19 | 0 | 0 | 0 | 57 | 18 | 10 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 2 | 250 | 18 | 1 | 44 | 19 | 0 | 0 | 0 | 57 | 18 | 10 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 270 | 64 | 0 | 85 |
| Volume Left (vph) | 2 | 1 | 0 | 57 |
| Volume Right (vph) | 18 | 19 | 0 | 10 |
| Hadj (s) | 0.00 | -0.14 | 0.00 | 0.10 |
| Departure Headway (s) | 4.2 | 4.3 | 4.8 | 4.7 |
| Degree Utilization, x | 0.31 | 0.08 | 0.00 | 0.11 |
| Capacity (veh/h) | 843 | 807 | 703 | 705 |
| Control Delay (s) | 9.1 | 7.6 | 7.8 | 8.3 |
| Approach Delay (s) | 9.1 | 7.6 | 0.0 | 8.3 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 8.7 | | |
| HCM Level of Service | A | | |
| Intersection Capacity Utilization | 26.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 3433 | 3471 | | 3433 | 3539 | 1583 | 3433 | 4996 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 3433 | 3471 | | 3433 | 3539 | 1583 | 3433 | 4996 | |
| Volume (vph) | 153 | 646 | 298 | 263 | 630 | 93 | 309 | 1032 | 400 | 162 | 861 | 114 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 153 | 646 | 298 | 263 | 630 | 93 | 309 | 1032 | 400 | 162 | 861 | 114 |
| RTOR Reduction (vph) | 0 | 0 | 257 | 0 | 10 | 0 | 0 | 0 | 265 | 0 | 15 | 0 |
| Lane Group Flow (vph) | 153 | 646 | 41 | 263 | 713 | 0 | 309 | 1032 | 135 | 162 | 960 | 0 |
| Turn Type | Prot | | Over | Prot | | | Prot | | Over | Prot | | |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 14.5 | 32.0 | 15.1 | 7.0 | 24.5 | | 15.1 | 44.8 | 7.0 | 10.2 | 39.9 | |
| Effective Green, g (s) | 14.5 | 32.0 | 15.1 | 7.0 | 24.5 | | 15.1 | 44.8 | 7.0 | 10.2 | 39.9 | |
| Actuated g/C Ratio | 0.13 | 0.29 | 0.14 | 0.06 | 0.22 | | 0.14 | 0.41 | 0.06 | 0.09 | 0.36 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 233 | 1030 | 217 | 218 | 773 | | 471 | 1441 | 101 | 318 | 1812 | |
| v/s Ratio Prot | c0.09 | 0.18 | 0.03 | 0.08 | c0.21 | | c0.09 | c0.29 | c0.09 | 0.05 | 0.19 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.66 | 0.63 | 0.19 | 1.21 | 0.92 | | 0.66 | 0.72 | 1.34 | 0.51 | 0.53 | |
| Uniform Delay, d1 | 45.4 | 33.8 | 42.0 | 51.5 | 41.8 | | 45.0 | 27.3 | 51.5 | 47.5 | 27.7 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 6.5 | 1.2 | 0.4 | 127.9 | 16.4 | | 3.3 | 3.1 | 204.1 | 1.3 | 1.1 | |
| Delay (s) | 51.9 | 35.0 | 42.4 | 179.4 | 58.2 | | 48.3 | 30.4 | 255.6 | 48.8 | 28.8 | |
| Level of Service | D | D | D | F | E | | D | C | F | D | C | |
| Approach Delay (s) | | 39.4 | | | 90.5 | | | 85.3 | | | 31.6 | |
| Approach LOS | | D | | | F | | | F | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 63.9 | HCM Level of Service | E |
| HCM Volume to Capacity ratio | 0.78 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 76.5% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Volume (veh/h) | 15 | 1068 | 896 | 24 | 9 | 25 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 15 | 1068 | 896 | 24 | 9 | 25 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | 516 | | | |
| pX, platoon unblocked | 0.83 | | | | 0.83 | 0.83 |
| vC, conflicting volume | 920 | | | | 1460 | 448 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 706 | | | | 1353 | 140 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 98 | | | | 92 | 97 |
| cM capacity (veh/h) | 741 | | | | 115 | 736 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | SB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 15 | 534 | 534 | 448 | 448 | 24 | 34 |
| Volume Left | 15 | 0 | 0 | 0 | 0 | 0 | 9 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 24 | 25 |
| cSH | 741 | 1700 | 1700 | 1700 | 1700 | 1700 | 304 |
| Volume to Capacity | 0.02 | 0.31 | 0.31 | 0.26 | 0.26 | 0.01 | 0.11 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 0 | 0 | 9 |
| Control Delay (s) | 10.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 18.3 |
| Lane LOS | A | | | | | | C |
| Approach Delay (s) | 0.1 | | | 0.0 | | | 18.3 |
| Approach LOS | | | | | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 39.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 22 | 1158 | 0 | 0 | 914 | 11 | 0 | 0 | 4 | 15 | 0 | 43 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 22 | 1158 | 0 | 0 | 914 | 11 | 0 | 0 | 4 | 15 | 0 | 43 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 561 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.85 | | | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | |
| vC, conflicting volume | 925 | | | 1158 | | | 1702 | 2127 | 579 | 1541 | 2116 | 457 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 925 | | | 1011 | | | 1650 | 2149 | 331 | 1461 | 2136 | 457 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 97 | | | 100 | | | 100 | 100 | 99 | 80 | 100 | 92 |
| cM capacity (veh/h) | 734 | | | 580 | | | 50 | 39 | 566 | 74 | 40 | 551 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 22 | 579 | 579 | 457 | 457 | 11 | 4 | 58 |
| Volume Left | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 11 | 4 | 43 |
| cSH | 734 | 1700 | 1700 | 1700 | 1700 | 1700 | 566 | 207 |
| Volume to Capacity | 0.03 | 0.34 | 0.34 | 0.27 | 0.27 | 0.01 | 0.01 | 0.28 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 27 |
| Control Delay (s) | 10.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 11.4 | 29.0 |
| Lane LOS | B | | | | | | B | D |
| Approach Delay (s) | 0.2 | | | 0.0 | | | 11.4 | 29.0 |
| Approach LOS | | | | | | | B | D |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.9 | | |
| Intersection Capacity Utilization | 48.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.94 | | 1.00 | 0.92 | | 1.00 | 0.98 | | 1.00 | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3319 | | 1770 | 3258 | | 1770 | 1819 | | 1770 | 1784 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3319 | | 1770 | 3258 | | 1770 | 1819 | | 1770 | 1784 | |
| Volume (vph) | 177 | 109 | 77 | 129 | 261 | 295 | 67 | 253 | 47 | 61 | 120 | 47 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 177 | 109 | 77 | 129 | 261 | 295 | 67 | 253 | 47 | 61 | 120 | 47 |
| RTOR Reduction (vph) | 0 | 59 | 0 | 0 | 196 | 0 | 0 | 5 | 0 | 0 | 11 | 0 |
| Lane Group Flow (vph) | 177 | 127 | 0 | 129 | 360 | 0 | 67 | 295 | 0 | 61 | 156 | 0 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 13.4 | 19.7 | | 9.6 | 15.9 | | 7.1 | 35.1 | | 5.4 | 33.4 | |
| Effective Green, g (s) | 13.4 | 19.7 | | 9.6 | 15.9 | | 7.1 | 35.1 | | 5.4 | 33.4 | |
| Actuated g/C Ratio | 0.16 | 0.23 | | 0.11 | 0.19 | | 0.08 | 0.41 | | 0.06 | 0.39 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 276 | 762 | | 198 | 604 | | 146 | 744 | | 111 | 694 | |
| v/s Ratio Prot | c0.10 | c0.04 | | 0.07 | c0.11 | | c0.04 | c0.16 | | 0.03 | 0.09 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.64 | 0.17 | | 0.65 | 0.60 | | 0.46 | 0.40 | | 0.55 | 0.22 | |
| Uniform Delay, d1 | 33.9 | 26.5 | | 36.5 | 32.0 | | 37.5 | 17.9 | | 39.0 | 17.5 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 5.0 | 0.1 | | 7.5 | 1.6 | | 2.3 | 1.6 | | 5.5 | 0.8 | |
| Delay (s) | 39.0 | 26.6 | | 44.0 | 33.6 | | 39.8 | 19.5 | | 44.5 | 18.3 | |
| Level of Service | D | C | | D | C | | D | B | | D | B | |
| Approach Delay (s) | | 32.6 | | | 35.6 | | | 23.2 | | | 25.3 | |
| Approach LOS | | C | | | D | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 30.7 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.49 | | |
| Actuated Cycle Length (s) | 85.8 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 61.8% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | | | 1.00 | 0.85 | | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.98 | |
| Satd. Flow (prot) | 1770 | 3453 | | 1770 | 3526 | | | 1805 | 1583 | | 1755 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.98 | |
| Satd. Flow (perm) | 1770 | 3453 | | 1770 | 3526 | | | 1805 | 1583 | | 1755 | |
| Volume (vph) | 19 | 599 | 116 | 69 | 647 | 17 | 83 | 46 | 112 | 31 | 37 | 32 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 19 | 599 | 116 | 69 | 647 | 17 | 83 | 46 | 112 | 31 | 37 | 32 |
| RTOR Reduction (vph) | 0 | 14 | 0 | 0 | 1 | 0 | 0 | 0 | 103 | 0 | 18 | 0 |
| Lane Group Flow (vph) | 19 | 701 | 0 | 69 | 663 | 0 | 0 | 129 | 9 | 0 | 82 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | Over | Split | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 2.6 | 22.5 | | 6.8 | 26.7 | | | 27.0 | 6.8 | | 8.1 | |
| Effective Green, g (s) | 2.6 | 22.5 | | 6.8 | 26.7 | | | 27.0 | 6.8 | | 8.1 | |
| Actuated g/C Ratio | 0.03 | 0.28 | | 0.08 | 0.33 | | | 0.34 | 0.08 | | 0.10 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 57 | 966 | | 150 | 1171 | | | 606 | 134 | | 177 | |
| v/s Ratio Prot | 0.01 | c0.20 | | c0.04 | 0.19 | | | c0.07 | 0.01 | | c0.05 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.33 | 0.73 | | 0.46 | 0.57 | | | 0.21 | 0.07 | | 0.46 | |
| Uniform Delay, d1 | 38.1 | 26.2 | | 35.1 | 22.1 | | | 19.1 | 33.9 | | 34.1 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 3.4 | 2.7 | | 2.2 | 0.6 | | | 0.8 | 0.2 | | 1.9 | |
| Delay (s) | 41.5 | 28.9 | | 37.3 | 22.7 | | | 19.9 | 34.1 | | 36.0 | |
| Level of Service | D | C | | D | C | | | B | C | | D | |
| Approach Delay (s) | | 29.2 | | | 24.1 | | | 26.5 | | | 36.0 | |
| Approach LOS | | C | | | C | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 27.2 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.45 | | |
| Actuated Cycle Length (s) | 80.4 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 49.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | | | 1.00 | |
| Frt | 1.00 | 0.99 | | 1.00 | 0.99 | | | 0.94 | | | 0.93 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | | | 0.98 | |
| Satd. Flow (prot) | 1770 | 3517 | | 1770 | 3513 | | | 1709 | | | 1695 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | | | 0.98 | |
| Satd. Flow (perm) | 1770 | 3517 | | 1770 | 3513 | | | 1709 | | | 1695 | |
| Volume (vph) | 25 | 699 | 30 | 22 | 706 | 36 | 52 | 4 | 43 | 17 | 0 | 17 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 25 | 699 | 30 | 22 | 706 | 36 | 52 | 4 | 43 | 17 | 0 | 17 |
| RTOR Reduction (vph) | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 28 | 0 | 0 | 16 | 0 |
| Lane Group Flow (vph) | 25 | 728 | 0 | 22 | 740 | 0 | 0 | 71 | 0 | 0 | 18 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | | Split | | |
| Protected Phases | 5 | 2 | | 1 | 6 | | 8 | 8 | | 4 | 4 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 3.2 | 57.0 | | 3.1 | 56.9 | | | 9.7 | | | 4.0 | |
| Effective Green, g (s) | 3.2 | 57.0 | | 3.1 | 56.9 | | | 9.7 | | | 4.0 | |
| Actuated g/C Ratio | 0.04 | 0.63 | | 0.03 | 0.63 | | | 0.11 | | | 0.04 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | 63 | 2232 | | 61 | 2226 | | | 185 | | | 76 | |
| v/s Ratio Prot | c0.01 | 0.21 | | 0.01 | c0.21 | | | c0.04 | | | c0.01 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.40 | 0.33 | | 0.36 | 0.33 | | | 0.39 | | | 0.23 | |
| Uniform Delay, d1 | 42.4 | 7.6 | | 42.4 | 7.6 | | | 37.3 | | | 41.4 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | 4.1 | 0.4 | | 3.6 | 0.4 | | | 1.3 | | | 1.6 | |
| Delay (s) | 46.4 | 7.9 | | 46.0 | 8.0 | | | 38.6 | | | 43.0 | |
| Level of Service | D | A | | D | A | | | D | | | D | |
| Approach Delay (s) | | 9.2 | | | 9.1 | | | 38.6 | | | 43.0 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 11.6 | HCM Level of Service | B |
| HCM Volume to Capacity ratio | 0.34 | | |
| Actuated Cycle Length (s) | 89.8 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 35.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 0.90 | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | 0.98 | 1.00 |
| Satd. Flow (prot) | 3539 | 1583 | 1770 | 3539 | 1645 | 1504 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | 0.98 | 1.00 |
| Satd. Flow (perm) | 3539 | 1583 | 1770 | 3539 | 1645 | 1504 |
| Volume (vph) | 718 | 63 | 349 | 683 | 66 | 350 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 718 | 63 | 349 | 683 | 66 | 350 |
| RTOR Reduction (vph) | 0 | 39 | 0 | 0 | 66 | 128 |
| Lane Group Flow (vph) | 718 | 24 | 349 | 683 | 145 | 77 |
| Turn Type | | Over | Prot | | | Prot |
| Protected Phases | 4 | 2 | 3 | 8 | 2 | 2 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 24.7 | 35.5 | 22.4 | 51.1 | 35.5 | 35.5 |
| Effective Green, g (s) | 24.7 | 35.5 | 22.4 | 51.1 | 35.5 | 35.5 |
| Actuated g/C Ratio | 0.26 | 0.38 | 0.24 | 0.54 | 0.38 | 0.38 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 924 | 594 | 419 | 1912 | 617 | 564 |
| v/s Ratio Prot | c0.20 | 0.01 | c0.20 | 0.19 | c0.09 | 0.05 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.78 | 0.04 | 0.83 | 0.36 | 0.24 | 0.14 |
| Uniform Delay, d1 | 32.4 | 18.7 | 34.3 | 12.4 | 20.3 | 19.5 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 4.2 | 0.1 | 13.3 | 0.1 | 0.9 | 0.5 |
| Delay (s) | 36.6 | 18.9 | 47.6 | 12.5 | 21.1 | 20.0 |
| Level of Service | D | B | D | B | C | B |
| Approach Delay (s) | 35.1 | | | 24.4 | 20.6 | |
| Approach LOS | D | | | C | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 27.4 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.56 | | |
| Actuated Cycle Length (s) | 94.6 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 60.0% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.86 | 1.00 | 0.97 | 0.86 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 6408 | 1583 | 3433 | 6408 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 6408 | 1583 | 3433 | 6408 | 1583 |
| Volume (vph) | 417 | 490 | 148 | 365 | 568 | 175 | 209 | 1584 | 307 | 196 | 1720 | 282 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 417 | 490 | 148 | 365 | 568 | 175 | 209 | 1584 | 307 | 196 | 1720 | 282 |
| RTOR Reduction (vph) | 0 | 0 | 121 | 0 | 0 | 124 | 0 | 0 | 139 | 0 | 0 | 118 |
| Lane Group Flow (vph) | 417 | 490 | 27 | 365 | 568 | 51 | 209 | 1584 | 168 | 196 | 1720 | 164 |
| Turn Type | Prot | | Over | Prot | | Over | Prot | | Over | Prot | | Over |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 18.0 | 20.0 | 16.0 | 18.0 | 20.0 | 15.6 | 16.0 | 120.4 | 18.0 | 15.6 | 120.0 | 18.0 |
| Effective Green, g (s) | 18.0 | 20.0 | 16.0 | 18.0 | 20.0 | 15.6 | 16.0 | 120.4 | 18.0 | 15.6 | 120.0 | 18.0 |
| Actuated g/C Ratio | 0.09 | 0.11 | 0.08 | 0.09 | 0.11 | 0.08 | 0.08 | 0.63 | 0.09 | 0.08 | 0.63 | 0.09 |
| Clearance 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 |
| 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 | 3.0 |
| Lane Grp Cap (vph) | 325 | 373 | 133 | 325 | 373 | 130 | 289 | 4061 | 150 | 282 | 4047 | 150 |
| v/s Ratio Prot | c0.12 | 0.14 | 0.02 | 0.11 | c0.16 | 0.03 | c0.06 | 0.25 | 0.11 | 0.06 | c0.27 | 0.10 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 1.28 | 1.31 | 0.20 | 1.12 | 1.52 | 0.39 | 0.72 | 0.39 | 1.12 | 0.70 | 0.43 | 1.10 |
| Uniform Delay, d1 | 86.0 | 85.0 | 81.1 | 86.0 | 85.0 | 82.7 | 84.8 | 16.9 | 86.0 | 84.9 | 17.6 | 86.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.19 | 1.23 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 148.9 | 159.1 | 0.8 | 87.4 | 248.6 | 2.0 | 8.0 | 0.3 | 105.4 | 7.2 | 0.3 | 101.3 |
| Delay (s) | 234.9 | 244.1 | 81.8 | 173.4 | 333.6 | 84.7 | 88.4 | 20.5 | 210.8 | 92.1 | 18.0 | 187.3 |
| Level of Service | F | F | F | F | F | F | F | C | F | F | B | F |
| Approach Delay (s) | | 217.7 | | | 241.5 | | | 55.0 | | | 46.3 | |
| Approach LOS | | F | | | F | | | E | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 110.6 | HCM Level of Service | F |
| HCM Volume to Capacity ratio | 0.67 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 74.2% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 1.00 | | 1.00 | 0.97 | 0.86 | | 1.00 | 0.86 | 1.00 |
| Frt | 1.00 | | 0.85 | 1.00 | | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 6403 | | 1770 | 6408 | 1583 |
| Flt Permitted | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 6403 | | 1770 | 6408 | 1583 |
| Volume (vph) | 365 | 0 | 232 | 16 | 0 | 7 | 169 | 1725 | 9 | 10 | 2135 | 231 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 365 | 0 | 232 | 16 | 0 | 7 | 169 | 1725 | 9 | 10 | 2135 | 231 |
| RTOR Reduction (vph) | 0 | 0 | 215 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 29 |
| Lane Group Flow (vph) | 365 | 0 | 17 | 16 | 0 | 0 | 169 | 1734 | 0 | 10 | 2135 | 202 |
| Turn Type | custom | | Over | custom | | Over | Prot | | | Prot | | Perm |
| Protected Phases | | | 5 | | | 1 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 6 |
| Actuated Green, G (s) | 23.4 | | 13.7 | 23.4 | | 4.4 | 13.7 | 150.2 | | 4.4 | 140.9 | 140.9 |
| Effective Green, g (s) | 23.4 | | 13.7 | 23.4 | | 4.4 | 13.7 | 150.2 | | 4.4 | 140.9 | 140.9 |
| Actuated g/C Ratio | 0.12 | | 0.07 | 0.12 | | 0.02 | 0.07 | 0.79 | | 0.02 | 0.74 | 0.74 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 423 | | 114 | 218 | | 37 | 248 | 5062 | | 41 | 4752 | 1174 |
| v/s Ratio Prot | | | 0.01 | | | 0.00 | c0.05 | 0.27 | | 0.01 | c0.33 | |
| v/s Ratio Perm | c0.11 | | | 0.01 | | | | | | | | 0.13 |
| v/c Ratio | 0.86 | | 0.15 | 0.07 | | 0.00 | 0.68 | 0.34 | | 0.24 | 0.45 | 0.17 |
| Uniform Delay, d1 | 81.7 | | 82.7 | 73.7 | | 90.7 | 86.0 | 5.7 | | 91.2 | 9.5 | 7.3 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 0.97 | 0.87 | 0.81 |
| Incremental Delay, d2 | 16.4 | | 0.6 | 0.1 | | 0.0 | 7.5 | 0.2 | | 2.7 | 0.3 | 0.3 |
| Delay (s) | 98.1 | | 83.3 | 73.9 | | 90.7 | 93.5 | 5.9 | | 91.0 | 8.5 | 6.2 |
| Level of Service | F | | F | E | | F | F | A | | F | A | A |
| Approach Delay (s) | | 92.4 | | | 79.0 | | | 13.7 | | | 8.6 | |
| Approach LOS | | F | | | E | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 21.1 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.52 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 58.6% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Volume (veh/h) | 126 | 24 | 224 | 195 | 44 | 206 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 126 | 24 | 224 | 195 | 44 | 206 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | 692 |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 616 | 322 | | | 419 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 616 | 322 | | | 419 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 71 | 97 | | | 96 | |
| cM capacity (veh/h) | 437 | 719 | | | 1140 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 150 | 419 | 44 | 206 |
| Volume Left | 126 | 0 | 44 | 0 |
| Volume Right | 24 | 195 | 0 | 0 |
| cSH | 466 | 1700 | 1140 | 1700 |
| Volume to Capacity | 0.32 | 0.25 | 0.04 | 0.12 |
| Queue Length 95th (ft) | 34 | 0 | 3 | 0 |
| Control Delay (s) | 16.3 | 0.0 | 8.3 | 0.0 |
| Lane LOS | C | | A | |
| Approach Delay (s) | 16.3 | 0.0 | 1.5 | |
| Approach LOS | C | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 3.4 | | |
| Intersection Capacity Utilization | 45.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 15 | 233 | 10 | 0 | 106 | 35 | 8 | 19 | 0 | 29 | 24 | 9 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 15 | 233 | 10 | 0 | 106 | 35 | 8 | 19 | 0 | 29 | 24 | 9 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 258 | 141 | 27 | 62 |
| Volume Left (vph) | 15 | 0 | 8 | 29 |
| Volume Right (vph) | 10 | 35 | 0 | 9 |
| Hadj (s) | 0.02 | -0.11 | 0.09 | 0.04 |
| Departure Headway (s) | 4.3 | 4.3 | 5.0 | 4.9 |
| Degree Utilization, x | 0.31 | 0.17 | 0.04 | 0.08 |
| Capacity (veh/h) | 816 | 803 | 660 | 676 |
| Control Delay (s) | 9.2 | 8.1 | 8.2 | 8.3 |
| Approach Delay (s) | 9.2 | 8.1 | 8.2 | 8.3 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 8.7 | | |
| HCM Level of Service | A | | |
| Intersection Capacity Utilization | 37.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.97 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 3433 | 3426 | | 3433 | 3539 | 1583 | 3433 | 5011 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 3433 | 3426 | | 3433 | 3539 | 1583 | 3433 | 5011 | |
| Volume (vph) | 132 | 485 | 183 | 288 | 478 | 130 | 211 | 604 | 178 | 99 | 758 | 82 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 132 | 485 | 183 | 288 | 478 | 130 | 211 | 604 | 178 | 99 | 758 | 82 |
| RTOR Reduction (vph) | 0 | 0 | 163 | 0 | 21 | 0 | 0 | 0 | 167 | 0 | 11 | 0 |
| Lane Group Flow (vph) | 132 | 485 | 20 | 288 | 587 | 0 | 211 | 604 | 11 | 99 | 829 | 0 |
| Turn Type | Prot | | Over | Prot | | | Prot | | Over | Prot | | |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 13.2 | 30.3 | 11.8 | 7.0 | 24.1 | | 11.8 | 48.1 | 7.0 | 8.6 | 44.9 | |
| Effective Green, g (s) | 13.2 | 30.3 | 11.8 | 7.0 | 24.1 | | 11.8 | 48.1 | 7.0 | 8.6 | 44.9 | |
| Actuated g/C Ratio | 0.12 | 0.28 | 0.11 | 0.06 | 0.22 | | 0.11 | 0.44 | 0.06 | 0.08 | 0.41 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 212 | 975 | 170 | 218 | 751 | | 368 | 1548 | 101 | 268 | 2045 | |
| v/s Ratio Prot | c0.07 | 0.14 | 0.01 | c0.08 | c0.17 | | c0.06 | c0.17 | 0.01 | 0.03 | 0.17 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.62 | 0.50 | 0.12 | 1.32 | 0.78 | | 0.57 | 0.39 | 0.11 | 0.37 | 0.41 | |
| Uniform Delay, d1 | 46.0 | 33.5 | 44.4 | 51.5 | 40.5 | | 46.7 | 21.0 | 48.6 | 48.1 | 23.1 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 5.6 | 0.4 | 0.3 | 172.9 | 5.3 | | 2.2 | 0.7 | 0.5 | 0.9 | 0.6 | |
| Delay (s) | 51.6 | 33.9 | 44.7 | 224.4 | 45.8 | | 48.9 | 21.7 | 49.1 | 49.0 | 23.7 | |
| Level of Service | D | C | D | F | D | | D | C | D | D | C | |
| Approach Delay (s) | | 39.3 | | | 103.2 | | | 32.4 | | | 26.4 | |
| Approach LOS | | D | | | F | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 49.8 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.59 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 60.5% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Volume (veh/h) | 25 | 711 | 806 | 10 | 9 | 15 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 25 | 711 | 806 | 10 | 9 | 15 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | 516 | | | |
| pX, platoon unblocked | 0.86 | | | | 0.86 | 0.86 |
| vC, conflicting volume | 816 | | | | 1212 | 403 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 622 | | | | 1082 | 141 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 97 | | | | 95 | 98 |
| cM capacity (veh/h) | 820 | | | | 177 | 757 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | SB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 25 | 356 | 356 | 403 | 403 | 10 | 24 |
| Volume Left | 25 | 0 | 0 | 0 | 0 | 0 | 9 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 10 | 15 |
| cSH | 820 | 1700 | 1700 | 1700 | 1700 | 1700 | 339 |
| Volume to Capacity | 0.03 | 0.21 | 0.21 | 0.24 | 0.24 | 0.01 | 0.07 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 0 | 0 | 6 |
| Control Delay (s) | 9.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 16.4 |
| Lane LOS | A | | | | | | C |
| Approach Delay (s) | 0.3 | | | 0.0 | | | 16.4 |
| Approach LOS | | | | | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 32.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 24 | 749 | 0 | 0 | 840 | 11 | 0 | 0 | 13 | 1 | 0 | 16 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 24 | 749 | 0 | 0 | 840 | 11 | 0 | 0 | 13 | 1 | 0 | 16 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 561 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.90 | | | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | |
| vC, conflicting volume | 851 | | | 749 | | | 1233 | 1648 | 374 | 1276 | 1637 | 420 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 851 | | | 607 | | | 1146 | 1608 | 190 | 1193 | 1596 | 420 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 97 | | | 100 | | | 100 | 100 | 98 | 99 | 100 | 97 |
| cM capacity (veh/h) | 783 | | | 869 | | | 132 | 90 | 736 | 123 | 92 | 582 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 24 | 374 | 374 | 420 | 420 | 11 | 13 | 17 |
| Volume Left | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 11 | 13 | 16 |
| cSH | 783 | 1700 | 1700 | 1700 | 1700 | 1700 | 736 | 477 |
| Volume to Capacity | 0.03 | 0.22 | 0.22 | 0.25 | 0.25 | 0.01 | 0.02 | 0.04 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| Control Delay (s) | 9.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.0 | 12.8 |
| Lane LOS | A | | | | | | A | B |
| Approach Delay (s) | 0.3 | | | 0.0 | | | 10.0 | 12.8 |
| Approach LOS | | | | | | | A | B |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 37.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.94 | | 1.00 | 0.91 | | 1.00 | 0.95 | | 1.00 | 0.97 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3326 | | 1770 | 3206 | | 1770 | 1773 | | 1770 | 1798 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3326 | | 1770 | 3206 | | 1770 | 1773 | | 1770 | 1798 | |
| Volume (vph) | 59 | 122 | 82 | 48 | 100 | 168 | 82 | 172 | 82 | 148 | 188 | 57 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 59 | 122 | 82 | 48 | 100 | 168 | 82 | 172 | 82 | 148 | 188 | 57 |
| RTOR Reduction (vph) | 0 | 70 | 0 | 0 | 144 | 0 | 0 | 12 | 0 | 0 | 7 | 0 |
| Lane Group Flow (vph) | 59 | 134 | 0 | 48 | 124 | 0 | 82 | 242 | 0 | 148 | 238 | 0 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 5.0 | 10.9 | | 4.7 | 10.6 | | 7.3 | 32.5 | | 9.5 | 34.7 | |
| Effective Green, g (s) | 5.0 | 10.9 | | 4.7 | 10.6 | | 7.3 | 32.5 | | 9.5 | 34.7 | |
| Actuated g/C Ratio | 0.07 | 0.15 | | 0.06 | 0.14 | | 0.10 | 0.44 | | 0.13 | 0.47 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 120 | 493 | | 113 | 462 | | 176 | 783 | | 228 | 848 | |
| v/s Ratio Prot | c0.03 | c0.04 | | 0.03 | 0.04 | | 0.05 | c0.14 | | c0.08 | 0.13 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.49 | 0.27 | | 0.42 | 0.27 | | 0.47 | 0.31 | | 0.65 | 0.28 | |
| Uniform Delay, d1 | 33.1 | 27.8 | | 33.1 | 28.0 | | 31.3 | 13.3 | | 30.5 | 11.8 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 3.1 | 0.3 | | 2.6 | 0.3 | | 1.9 | 1.0 | | 6.2 | 0.8 | |
| Delay (s) | 36.2 | 28.1 | | 35.7 | 28.4 | | 33.3 | 14.3 | | 36.7 | 12.7 | |
| Level of Service | D | C | | D | C | | C | B | | D | B | |
| Approach Delay (s) | | 29.9 | | | 29.5 | | | 18.9 | | | 21.7 | |
| Approach LOS | | C | | | C | | | B | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 24.5 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.34 | | |
| Actuated Cycle Length (s) | 73.6 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 49.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | | | 1.00 | 0.85 | | 0.97 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (prot) | 1770 | 3469 | | 1770 | 3524 | | | 1813 | 1583 | | 1791 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (perm) | 1770 | 3469 | | 1770 | 3524 | | | 1813 | 1583 | | 1791 | |
| Volume (vph) | 19 | 730 | 111 | 95 | 745 | 22 | 65 | 53 | 96 | 28 | 54 | 19 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 19 | 730 | 111 | 95 | 745 | 22 | 65 | 53 | 96 | 28 | 54 | 19 |
| RTOR Reduction (vph) | 0 | 10 | 0 | 0 | 1 | 0 | 0 | 0 | 87 | 0 | 9 | 0 |
| Lane Group Flow (vph) | 19 | 831 | 0 | 95 | 766 | 0 | 0 | 118 | 9 | 0 | 92 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | Over | Split | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 2.7 | 27.3 | | 8.1 | 32.7 | | | 26.0 | 8.1 | | 8.4 | |
| Effective Green, g (s) | 2.7 | 27.3 | | 8.1 | 32.7 | | | 26.0 | 8.1 | | 8.4 | |
| Actuated g/C Ratio | 0.03 | 0.32 | | 0.09 | 0.38 | | | 0.30 | 0.09 | | 0.10 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 56 | 1104 | | 167 | 1343 | | | 549 | 149 | | 175 | |
| v/s Ratio Prot | 0.01 | c0.24 | | c0.05 | 0.22 | | | c0.07 | 0.01 | | c0.05 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.34 | 0.75 | | 0.57 | 0.57 | | | 0.21 | 0.06 | | 0.53 | |
| Uniform Delay, d1 | 40.7 | 26.2 | | 37.2 | 21.0 | | | 22.3 | 35.4 | | 36.8 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 3.6 | 3.0 | | 4.4 | 0.6 | | | 0.9 | 0.2 | | 2.8 | |
| Delay (s) | 44.3 | 29.2 | | 41.6 | 21.6 | | | 23.2 | 35.6 | | 39.6 | |
| Level of Service | D | C | | D | C | | | C | D | | D | |
| Approach Delay (s) | | 29.5 | | | 23.8 | | | 28.7 | | | 39.6 | |
| Approach LOS | | C | | | C | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 27.5 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.50 | | |
| Actuated Cycle Length (s) | 85.8 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 51.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | | | 1.00 | |
| Frt | 1.00 | 1.00 | | 1.00 | 1.00 | | | 0.97 | | | 0.90 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.96 | | | 0.99 | |
| Satd. Flow (prot) | 1770 | 3522 | | 1770 | 3529 | | | 1735 | | | 1661 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.96 | | | 0.99 | |
| Satd. Flow (perm) | 1770 | 3522 | | 1770 | 3529 | | | 1735 | | | 1661 | |
| Volume (vph) | 19 | 862 | 29 | 10 | 854 | 16 | 48 | 0 | 16 | 8 | 0 | 19 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 19 | 862 | 29 | 10 | 854 | 16 | 48 | 0 | 16 | 8 | 0 | 19 |
| RTOR Reduction (vph) | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 12 | 0 | 0 | 18 | 0 |
| Lane Group Flow (vph) | 19 | 890 | 0 | 10 | 869 | 0 | 0 | 52 | 0 | 0 | 9 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | | Split | | |
| Protected Phases | 5 | 2 | | 1 | 6 | | 8 | 8 | | 4 | 4 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 3.2 | 66.8 | | 1.5 | 65.1 | | | 9.0 | | | 4.3 | |
| Effective Green, g (s) | 3.2 | 66.8 | | 1.5 | 65.1 | | | 9.0 | | | 4.3 | |
| Actuated g/C Ratio | 0.03 | 0.68 | | 0.02 | 0.67 | | | 0.09 | | | 0.04 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | 58 | 2411 | | 27 | 2354 | | | 160 | | | 73 | |
| v/s Ratio Prot | c0.01 | c0.25 | | 0.01 | 0.25 | | | c0.03 | | | c0.01 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.33 | 0.37 | | 0.37 | 0.37 | | | 0.33 | | | 0.12 | |
| Uniform Delay, d1 | 46.1 | 6.5 | | 47.6 | 7.2 | | | 41.5 | | | 44.8 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | 3.3 | 0.4 | | 8.4 | 0.4 | | | 1.2 | | | 0.7 | |
| Delay (s) | 49.4 | 6.9 | | 56.0 | 7.6 | | | 42.7 | | | 45.6 | |
| Level of Service | D | A | | E | A | | | D | | | D | |
| Approach Delay (s) | | 7.8 | | | 8.2 | | | 42.7 | | | 45.6 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 9.7 | HCM Level of Service | A |
| HCM Volume to Capacity ratio | 0.34 | | |
| Actuated Cycle Length (s) | 97.6 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 39.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 0.88 | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | 0.99 | 1.00 |
| Satd. Flow (prot) | 3539 | 1583 | 1770 | 3539 | 1619 | 1504 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | 0.99 | 1.00 |
| Satd. Flow (perm) | 3539 | 1583 | 1770 | 3539 | 1619 | 1504 |
| Volume (vph) | 865 | 64 | 285 | 884 | 58 | 570 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 865 | 64 | 285 | 884 | 58 | 570 |
| RTOR Reduction (vph) | 0 | 40 | 0 | 0 | 136 | 195 |
| Lane Group Flow (vph) | 865 | 24 | 285 | 884 | 183 | 114 |
| Turn Type | | Over | Prot | | | Prot |
| Protected Phases | 4 | 2 | 3 | 8 | 2 | 2 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 28.8 | 35.6 | 19.8 | 52.6 | 35.6 | 35.6 |
| Effective Green, g (s) | 28.8 | 35.6 | 19.8 | 52.6 | 35.6 | 35.6 |
| Actuated g/C Ratio | 0.30 | 0.37 | 0.21 | 0.55 | 0.37 | 0.37 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 1059 | 586 | 364 | 1935 | 599 | 557 |
| v/s Ratio Prot | c0.24 | 0.01 | c0.16 | 0.25 | c0.11 | 0.08 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.82 | 0.04 | 0.78 | 0.46 | 0.31 | 0.21 |
| Uniform Delay, d1 | 31.3 | 19.4 | 36.2 | 13.2 | 21.5 | 20.7 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 5.0 | 0.1 | 10.5 | 0.2 | 1.3 | 0.8 |
| Delay (s) | 36.2 | 19.5 | 46.7 | 13.3 | 22.8 | 21.5 |
| Level of Service | D | B | D | B | C | C |
| Approach Delay (s) | 35.1 | | | 21.5 | 22.2 | |
| Approach LOS | D | | | C | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 26.3 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.59 | | |
| Actuated Cycle Length (s) | 96.2 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 64.6% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.86 | 1.00 | 0.97 | 0.86 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 6408 | 1583 | 3433 | 6408 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 6408 | 1583 | 3433 | 6408 | 1583 |
| Volume (vph) | 575 | 676 | 215 | 371 | 649 | 186 | 258 | 1689 | 293 | 276 | 2148 | 416 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 575 | 676 | 215 | 371 | 649 | 186 | 258 | 1689 | 293 | 276 | 2148 | 416 |
| RTOR Reduction (vph) | 0 | 0 | 126 | 0 | 0 | 113 | 0 | 0 | 124 | 0 | 0 | 139 |
| Lane Group Flow (vph) | 575 | 676 | 89 | 371 | 649 | 73 | 258 | 1689 | 169 | 276 | 2148 | 277 |
| Turn Type | Prot | | Over | Prot | | Over | Prot | | Over | Prot | | Over |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 18.0 | 20.0 | 17.4 | 18.0 | 20.0 | 17.6 | 17.4 | 118.4 | 18.0 | 17.6 | 118.6 | 18.0 |
| Effective Green, g (s) | 18.0 | 20.0 | 17.4 | 18.0 | 20.0 | 17.6 | 17.4 | 118.4 | 18.0 | 17.6 | 118.6 | 18.0 |
| Actuated g/C Ratio | 0.09 | 0.11 | 0.09 | 0.09 | 0.11 | 0.09 | 0.09 | 0.62 | 0.09 | 0.09 | 0.62 | 0.09 |
| Clearance 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 |
| 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 | 3.0 |
| Lane Grp Cap (vph) | 325 | 373 | 145 | 325 | 373 | 147 | 314 | 3993 | 150 | 318 | 4000 | 150 |
| v/s Ratio Prot | 0.17 | c0.19 | 0.06 | 0.11 | 0.18 | 0.05 | 0.08 | 0.26 | 0.11 | c0.08 | c0.34 | c0.18 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 1.77 | 1.81 | 0.61 | 1.14 | 1.74 | 0.49 | 0.82 | 0.42 | 1.13 | 0.87 | 0.54 | 1.85 |
| Uniform Delay, d1 | 86.0 | 85.0 | 83.1 | 86.0 | 85.0 | 82.0 | 84.8 | 18.3 | 86.0 | 85.1 | 20.2 | 86.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.01 | 1.12 | 1.19 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 358.5 | 376.0 | 7.4 | 94.0 | 344.0 | 2.6 | 14.3 | 0.3 | 107.7 | 21.3 | 0.5 | 407.0 |
| Delay (s) | 444.5 | 461.0 | 90.5 | 180.0 | 429.0 | 84.6 | 99.9 | 20.8 | 210.2 | 106.3 | 20.7 | 493.0 |
| Level of Service | F | F | F | F | F | F | F | C | F | F | C | F |
| Approach Delay (s) | | 400.2 | | | 299.2 | | | 54.7 | | | 98.2 | |
| Approach LOS | | F | | | F | | | D | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 174.0 | HCM Level of Service | F |
| HCM Volume to Capacity ratio | 0.83 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 87.1% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 1.00 | | 1.00 | 0.97 | 0.86 | | 1.00 | 0.86 | 1.00 |
| Frt | 1.00 | | 0.85 | 1.00 | | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 6398 | | 1770 | 6408 | 1583 |
| Flt Permitted | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 6398 | | 1770 | 6408 | 1583 |
| Volume (vph) | 392 | 0 | 345 | 9 | 0 | 22 | 238 | 1885 | 20 | 22 | 2498 | 282 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 392 | 0 | 345 | 9 | 0 | 22 | 238 | 1885 | 20 | 22 | 2498 | 282 |
| RTOR Reduction (vph) | 0 | 0 | 313 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 34 |
| Lane Group Flow (vph) | 392 | 0 | 32 | 9 | 0 | 1 | 238 | 1905 | 0 | 22 | 2498 | 248 |
| Turn Type | custom | | Over | custom | | Over | Prot | | | Prot | | Perm |
| Protected Phases | | | 5 | | | 1 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 6 |
| Actuated Green, G (s) | 24.8 | | 17.6 | 24.8 | | 6.6 | 17.6 | 146.6 | | 6.6 | 135.6 | 135.6 |
| Effective Green, g (s) | 24.8 | | 17.6 | 24.8 | | 6.6 | 17.6 | 146.6 | | 6.6 | 135.6 | 135.6 |
| Actuated g/C Ratio | 0.13 | | 0.09 | 0.13 | | 0.03 | 0.09 | 0.77 | | 0.03 | 0.71 | 0.71 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 448 | | 147 | 231 | | 55 | 318 | 4937 | | 61 | 4573 | 1130 |
| v/s Ratio Prot | | | 0.02 | | | 0.00 | c0.07 | 0.30 | | 0.01 | c0.39 | |
| v/s Ratio Perm | c0.11 | | | 0.01 | | | | | | | | 0.16 |
| v/c Ratio | 0.88 | | 0.22 | 0.04 | | 0.01 | 0.75 | 0.39 | | 0.36 | 0.55 | 0.22 |
| Uniform Delay, d1 | 81.1 | | 79.8 | 72.2 | | 88.6 | 84.0 | 7.1 | | 89.6 | 12.8 | 9.2 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 0.94 | 0.74 | 0.75 |
| Incremental Delay, d2 | 17.1 | | 0.7 | 0.1 | | 0.1 | 9.3 | 0.2 | | 2.8 | 0.4 | 0.3 |
| Delay (s) | 98.2 | | 80.6 | 72.3 | | 88.7 | 93.3 | 7.3 | | 87.1 | 9.8 | 7.3 |
| Level of Service | F | | F | E | | F | F | A | | F | A | A |
| Approach Delay (s) | | 89.9 | | | 83.9 | | | 16.8 | | | 10.2 | |
| Approach LOS | | F | | | F | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 23.4 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.61 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 70.9% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Volume (veh/h) | 254 | 13 | 163 | 176 | 46 | 268 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 254 | 13 | 163 | 176 | 46 | 268 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | 692 |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 611 | 251 | | | 339 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 611 | 251 | | | 339 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 42 | 98 | | | 96 | |
| cM capacity (veh/h) | 440 | 788 | | | 1220 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 267 | 339 | 46 | 268 |
| Volume Left | 254 | 0 | 46 | 0 |
| Volume Right | 13 | 176 | 0 | 0 |
| cSH | 450 | 1700 | 1220 | 1700 |
| Volume to Capacity | 0.59 | 0.20 | 0.04 | 0.16 |
| Queue Length 95th (ft) | 94 | 0 | 3 | 0 |
| Control Delay (s) | 24.1 | 0.0 | 8.1 | 0.0 |
| Lane LOS | C | | A | |
| Approach Delay (s) | 24.1 | 0.0 | 1.2 | |
| Approach LOS | C | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 7.4 | | |
| Intersection Capacity Utilization | 47.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 9 | 193 | 3 | 1 | 235 | 3 | 4 | 4 | 0 | 27 | 7 | 2 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 9 | 193 | 3 | 1 | 235 | 3 | 4 | 4 | 0 | 27 | 7 | 2 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 205 | 239 | 8 | 36 |
| Volume Left (vph) | 9 | 1 | 4 | 27 |
| Volume Right (vph) | 3 | 3 | 0 | 2 |
| Hadj (s) | 0.03 | 0.03 | 0.13 | 0.15 |
| Departure Headway (s) | 4.3 | 4.3 | 5.1 | 5.0 |
| Degree Utilization, x | 0.24 | 0.28 | 0.01 | 0.05 |
| Capacity (veh/h) | 821 | 822 | 644 | 649 |
| Control Delay (s) | 8.7 | 8.9 | 8.1 | 8.3 |
| Approach Delay (s) | 8.7 | 8.9 | 8.1 | 8.3 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 8.8 | | |
| HCM Level of Service | A | | |
| Intersection Capacity Utilization | 26.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 3433 | 3464 | | 3433 | 3539 | 1583 | 3433 | 5009 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 3433 | 3464 | | 3433 | 3539 | 1583 | 3433 | 5009 | |
| Volume (vph) | 129 | 597 | 316 | 264 | 580 | 96 | 267 | 660 | 198 | 127 | 851 | 94 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 129 | 597 | 316 | 264 | 580 | 96 | 267 | 660 | 198 | 127 | 851 | 94 |
| RTOR Reduction (vph) | 0 | 0 | 276 | 0 | 11 | 0 | 0 | 0 | 185 | 0 | 11 | 0 |
| Lane Group Flow (vph) | 129 | 597 | 40 | 264 | 665 | 0 | 267 | 660 | 13 | 127 | 934 | 0 |
| Turn Type | Prot | | Over | Prot | | | Prot | | Over | Prot | | |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 13.0 | 32.0 | 13.9 | 7.0 | 26.0 | | 13.9 | 45.6 | 7.0 | 9.4 | 41.1 | |
| Effective Green, g (s) | 13.0 | 32.0 | 13.9 | 7.0 | 26.0 | | 13.9 | 45.6 | 7.0 | 9.4 | 41.1 | |
| Actuated g/C Ratio | 0.12 | 0.29 | 0.13 | 0.06 | 0.24 | | 0.13 | 0.41 | 0.06 | 0.09 | 0.37 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 209 | 1030 | 200 | 218 | 819 | | 434 | 1467 | 101 | 293 | 1872 | |
| v/s Ratio Prot | c0.07 | 0.17 | 0.03 | c0.08 | c0.19 | | c0.08 | 0.19 | 0.01 | 0.04 | c0.19 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.62 | 0.58 | 0.20 | 1.21 | 0.81 | | 0.62 | 0.45 | 0.12 | 0.43 | 0.50 | |
| Uniform Delay, d1 | 46.1 | 33.3 | 43.1 | 51.5 | 39.7 | | 45.5 | 23.2 | 48.6 | 47.8 | 26.5 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 5.3 | 0.8 | 0.5 | 129.7 | 6.1 | | 2.6 | 1.0 | 0.6 | 1.0 | 1.0 | |
| Delay (s) | 51.5 | 34.1 | 43.6 | 181.2 | 45.8 | | 48.1 | 24.2 | 49.2 | 48.8 | 27.5 | |
| Level of Service | D | C | D | F | D | | D | C | D | D | C | |
| Approach Delay (s) | | 39.1 | | | 83.8 | | | 34.3 | | | 30.0 | |
| Approach LOS | | D | | | F | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 45.5 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.65 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 65.7% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Volume (veh/h) | 17 | 791 | 861 | 25 | 15 | 12 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 17 | 791 | 861 | 25 | 15 | 12 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | 516 | | | |
| pX, platoon unblocked | 0.84 | | | | 0.84 | 0.84 |
| vC, conflicting volume | 886 | | | | 1290 | 430 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 675 | | | | 1156 | 133 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 98 | | | | 90 | 98 |
| cM capacity (veh/h) | 767 | | | | 156 | 749 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | SB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 17 | 396 | 396 | 430 | 430 | 25 | 27 |
| Volume Left | 17 | 0 | 0 | 0 | 0 | 0 | 15 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 25 | 12 |
| cSH | 767 | 1700 | 1700 | 1700 | 1700 | 1700 | 241 |
| Volume to Capacity | 0.02 | 0.23 | 0.23 | 0.25 | 0.25 | 0.01 | 0.11 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 0 | 0 | 9 |
| Control Delay (s) | 9.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 21.8 |
| Lane LOS | A | | | | | | C |
| Approach Delay (s) | 0.2 | | | 0.0 | | | 21.8 |
| Approach LOS | | | | | | | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 33.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 34 | 792 | 0 | 0 | 875 | 11 | 0 | 0 | 4 | 3 | 0 | 18 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 34 | 792 | 0 | 0 | 875 | 11 | 0 | 0 | 4 | 3 | 0 | 18 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 561 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.88 | | | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | |
| vC, conflicting volume | 886 | | | 792 | | | 1316 | 1746 | 396 | 1343 | 1735 | 438 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 886 | | | 629 | | | 1223 | 1712 | 180 | 1255 | 1699 | 438 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 96 | | | 100 | | | 100 | 100 | 99 | 97 | 100 | 97 |
| cM capacity (veh/h) | 760 | | | 836 | | | 111 | 75 | 733 | 109 | 77 | 567 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 34 | 396 | 396 | 438 | 438 | 11 | 4 | 21 |
| Volume Left | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 11 | 4 | 18 |
| cSH | 760 | 1700 | 1700 | 1700 | 1700 | 1700 | 733 | 354 |
| Volume to Capacity | 0.04 | 0.23 | 0.23 | 0.26 | 0.26 | 0.01 | 0.01 | 0.06 |
| Queue Length 95th (ft) | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Control Delay (s) | 10.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 9.9 | 15.8 |
| Lane LOS | A | | | | | | A | C |
| Approach Delay (s) | 0.4 | | | 0.0 | | | 9.9 | 15.8 |
| Approach LOS | | | | | | | A | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.4 | | |
| Intersection Capacity Utilization | 38.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.97 | | 1.00 | 0.91 | | 1.00 | 0.92 | | 1.00 | 0.94 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3431 | | 1770 | 3230 | | 1770 | 1714 | | 1770 | 1750 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3431 | | 1770 | 3230 | | 1770 | 1714 | | 1770 | 1750 | |
| Volume (vph) | 59 | 141 | 36 | 97 | 119 | 166 | 43 | 105 | 120 | 232 | 155 | 105 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 59 | 141 | 36 | 97 | 119 | 166 | 43 | 105 | 120 | 232 | 155 | 105 |
| RTOR Reduction (vph) | 0 | 23 | 0 | 0 | 137 | 0 | 0 | 31 | 0 | 0 | 15 | 0 |
| Lane Group Flow (vph) | 59 | 154 | 0 | 97 | 148 | 0 | 43 | 194 | 0 | 232 | 245 | 0 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 5.3 | 11.4 | | 8.1 | 14.2 | | 4.7 | 30.5 | | 14.9 | 40.7 | |
| Effective Green, g (s) | 5.3 | 11.4 | | 8.1 | 14.2 | | 4.7 | 30.5 | | 14.9 | 40.7 | |
| Actuated g/C Ratio | 0.07 | 0.14 | | 0.10 | 0.18 | | 0.06 | 0.38 | | 0.18 | 0.50 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 116 | 483 | | 177 | 567 | | 103 | 646 | | 326 | 880 | |
| v/s Ratio Prot | 0.03 | 0.04 | | c0.05 | c0.05 | | 0.02 | 0.11 | | c0.13 | c0.14 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.51 | 0.32 | | 0.55 | 0.26 | | 0.42 | 0.30 | | 0.71 | 0.28 | |
| Uniform Delay, d1 | 36.5 | 31.3 | | 34.7 | 28.8 | | 36.8 | 17.7 | | 31.0 | 11.6 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 3.5 | 0.4 | | 3.4 | 0.2 | | 2.7 | 1.2 | | 7.2 | 0.8 | |
| Delay (s) | 40.0 | 31.6 | | 38.1 | 29.1 | | 39.5 | 18.9 | | 38.1 | 12.4 | |
| Level of Service | D | C | | D | C | | D | B | | D | B | |
| Approach Delay (s) | | 33.7 | | | 31.4 | | | 22.2 | | | 24.5 | |
| Approach LOS | | C | | | C | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 27.5 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.40 | | |
| Actuated Cycle Length (s) | 80.9 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 53.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | 1.00 | 0.98 | | 1.00 | 1.00 | | | 1.00 | 0.85 | | 0.96 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (prot) | 1770 | 3459 | | 1770 | 3529 | | | 1807 | 1583 | | 1763 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | 1.00 | | 0.99 | |
| Satd. Flow (perm) | 1770 | 3459 | | 1770 | 3529 | | | 1807 | 1583 | | 1763 | |
| Volume (vph) | 66 | 959 | 170 | 118 | 890 | 17 | 148 | 92 | 133 | 39 | 95 | 66 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 66 | 959 | 170 | 118 | 890 | 17 | 148 | 92 | 133 | 39 | 95 | 66 |
| RTOR Reduction (vph) | 0 | 12 | 0 | 0 | 1 | 0 | 0 | 0 | 117 | 0 | 18 | 0 |
| Lane Group Flow (vph) | 66 | 1117 | 0 | 118 | 906 | 0 | 0 | 240 | 16 | 0 | 182 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | Over | Split | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 7.6 | 27.1 | | 11.5 | 31.0 | | | 25.2 | 11.5 | | 15.1 | |
| Effective Green, g (s) | 7.6 | 27.1 | | 11.5 | 31.0 | | | 25.2 | 11.5 | | 15.1 | |
| Actuated g/C Ratio | 0.08 | 0.29 | | 0.12 | 0.33 | | | 0.27 | 0.12 | | 0.16 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | 142 | 988 | | 214 | 1153 | | | 480 | 192 | | 281 | |
| v/s Ratio Prot | 0.04 | c0.32 | | c0.07 | c0.26 | | | c0.13 | 0.01 | | c0.10 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.46 | 1.13 | | 0.55 | 0.79 | | | 0.50 | 0.08 | | 0.65 | |
| Uniform Delay, d1 | 41.7 | 33.9 | | 39.3 | 28.9 | | | 29.5 | 37.0 | | 37.4 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | 2.4 | 71.6 | | 3.1 | 3.6 | | | 3.7 | 0.2 | | 5.1 | |
| Delay (s) | 44.1 | 105.5 | | 42.3 | 32.5 | | | 33.2 | 37.2 | | 42.5 | |
| Level of Service | D | F | | D | C | | | C | D | | D | |
| Approach Delay (s) | | 102.1 | | | 33.7 | | | 34.6 | | | 42.5 | |
| Approach LOS | | F | | | C | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 63.7 | HCM Level of Service | E |
| HCM Volume to Capacity ratio | 0.79 | | |
| Actuated Cycle Length (s) | 94.9 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 76.0% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | | 1.00 | | | 1.00 | |
| Frt | 1.00 | 1.00 | | 1.00 | 0.99 | | | 0.97 | | | 0.94 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | | | 0.97 | |
| Satd. Flow (prot) | 1770 | 3532 | | 1770 | 3519 | | | 1740 | | | 1699 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.97 | | | 0.97 | |
| Satd. Flow (perm) | 1770 | 3532 | | 1770 | 3519 | | | 1740 | | | 1699 | |
| Volume (vph) | 69 | 1169 | 16 | 16 | 1020 | 40 | 36 | 3 | 13 | 21 | 0 | 19 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 69 | 1169 | 16 | 16 | 1020 | 40 | 36 | 3 | 13 | 21 | 0 | 19 |
| RTOR Reduction (vph) | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 12 | 0 | 0 | 18 | 0 |
| Lane Group Flow (vph) | 69 | 1184 | 0 | 16 | 1059 | 0 | 0 | 40 | 0 | 0 | 22 | 0 |
| Turn Type | Prot | | | Prot | | | Split | | | Split | | |
| Protected Phases | 5 | 2 | | 1 | 6 | | 8 | 8 | | 4 | 4 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 8.1 | 67.7 | | 2.8 | 62.4 | | | 6.3 | | | 6.2 | |
| Effective Green, g (s) | 8.1 | 67.7 | | 2.8 | 62.4 | | | 6.3 | | | 6.2 | |
| Actuated g/C Ratio | 0.08 | 0.68 | | 0.03 | 0.63 | | | 0.06 | | | 0.06 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | 145 | 2415 | | 50 | 2218 | | | 111 | | | 106 | |
| v/s Ratio Prot | c0.04 | c0.34 | | 0.01 | 0.30 | | | c0.02 | | | c0.01 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.48 | 0.49 | | 0.32 | 0.48 | | | 0.36 | | | 0.21 | |
| Uniform Delay, d1 | 43.4 | 7.4 | | 47.2 | 9.7 | | | 44.4 | | | 44.1 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | 2.5 | 0.7 | | 3.7 | 0.7 | | | 2.0 | | | 1.0 | |
| Delay (s) | 45.9 | 8.2 | | 50.8 | 10.4 | | | 46.4 | | | 45.1 | |
| Level of Service | D | A | | D | B | | | D | | | D | |
| Approach Delay (s) | | 10.2 | | | 11.0 | | | 46.4 | | | 45.1 | |
| Approach LOS | | B | | | B | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 11.9 | HCM Level of Service | B |
| HCM Volume to Capacity ratio | 0.45 | | |
| Actuated Cycle Length (s) | 99.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 57.0% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 0.87 | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | 0.99 | 1.00 |
| Satd. Flow (prot) | 3539 | 1583 | 1770 | 3539 | 1609 | 1504 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | 0.99 | 1.00 |
| Satd. Flow (perm) | 3539 | 1583 | 1770 | 3539 | 1609 | 1504 |
| Volume (vph) | 1176 | 34 | 170 | 1127 | 48 | 670 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 1176 | 34 | 170 | 1127 | 48 | 670 |
| RTOR Reduction (vph) | 0 | 19 | 0 | 0 | 211 | 218 |
| Lane Group Flow (vph) | 1176 | 15 | 170 | 1127 | 167 | 122 |
| Turn Type | | Over | Prot | | | Prot |
| Protected Phases | 4 | 2 | 3 | 8 | 2 | 2 |
| Permitted Phases | | | | | | |
| Actuated Green, G (s) | 36.1 | 35.1 | 14.5 | 54.6 | 35.1 | 35.1 |
| Effective Green, g (s) | 36.1 | 35.1 | 14.5 | 54.6 | 35.1 | 35.1 |
| Actuated g/C Ratio | 0.37 | 0.36 | 0.15 | 0.56 | 0.36 | 0.36 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 1308 | 569 | 263 | 1978 | 578 | 540 |
| v/s Ratio Prot | c0.33 | 0.01 | c0.10 | 0.32 | c0.10 | 0.08 |
| v/s Ratio Perm | | | | | | |
| v/c Ratio | 0.90 | 0.03 | 0.65 | 0.57 | 0.29 | 0.23 |
| Uniform Delay, d1 | 29.1 | 20.3 | 39.2 | 13.9 | 22.4 | 21.8 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 8.5 | 0.1 | 5.4 | 0.4 | 1.3 | 1.0 |
| Delay (s) | 37.6 | 20.3 | 44.6 | 14.3 | 23.6 | 22.8 |
| Level of Service | D | C | D | B | C | C |
| Approach Delay (s) | 37.1 | | | 18.3 | 23.2 | |
| Approach LOS | D | | | B | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 26.5 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.61 | | |
| Actuated Cycle Length (s) | 97.7 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 68.4% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| 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 |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | 1.00 | 0.97 | 0.91 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 5085 | 1583 | 3433 | 5085 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 5085 | 1583 | 3433 | 5085 | 1583 |
| Volume (vph) | 672 | 937 | 316 | 408 | 663 | 115 | 180 | 1785 | 380 | 297 | 3556 | 313 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor (vph) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 85% | 100% | 100% | 85% | 100% |
| Adj. Flow (vph) | 672 | 937 | 316 | 408 | 663 | 115 | 180 | 1517 | 380 | 297 | 3023 | 313 |
| RTOR Reduction (vph) | 0 | 0 | 128 | 0 | 0 | 69 | 0 | 0 | 142 | 0 | 0 | 59 |
| Lane Group Flow (vph) | 672 | 937 | 188 | 408 | 663 | 46 | 180 | 1517 | 238 | 297 | 3023 | 254 |
| Turn Type | Prot | | Over | Prot | | Over | Prot | | Over | Prot | | Over |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | 1 | 5 | 2 | 3 | 1 | 6 | 7 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 18.0 | 20.0 | 18.0 | 18.0 | 20.0 | 18.0 | 18.0 | 118.0 | 18.0 | 18.0 | 118.0 | 18.0 |
| Effective Green, g (s) | 18.0 | 20.0 | 18.0 | 18.0 | 20.0 | 18.0 | 18.0 | 118.0 | 18.0 | 18.0 | 118.0 | 18.0 |
| Actuated g/C Ratio | 0.09 | 0.11 | 0.09 | 0.09 | 0.11 | 0.09 | 0.09 | 0.62 | 0.09 | 0.09 | 0.62 | 0.09 |
| Clearance 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 |
| 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 | 3.0 |
| Lane Grp Cap (vph) | 325 | 373 | 150 | 325 | 373 | 150 | 325 | 3158 | 150 | 325 | 3158 | 150 |
| v/s Ratio Prot | c0.20 | c0.26 | c0.12 | 0.12 | 0.19 | 0.03 | 0.05 | 0.30 | 0.15 | 0.09 | c0.59 | 0.16 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 2.07 | 2.51 | 1.26 | 1.26 | 1.78 | 0.31 | 0.55 | 0.48 | 1.59 | 0.91 | 0.96 | 1.69 |
| Uniform Delay, d1 | 86.0 | 85.0 | 86.0 | 86.0 | 85.0 | 80.2 | 82.2 | 19.4 | 86.0 | 85.2 | 33.6 | 86.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.09 | 1.21 | 1.25 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 491.0 | 688.4 | 158.0 | 137.7 | 360.6 | 1.2 | 1.8 | 0.5 | 289.2 | 28.8 | 8.8 | 339.4 |
| Delay (s) | 577.0 | 773.4 | 244.0 | 223.7 | 445.6 | 81.4 | 91.6 | 23.9 | 396.9 | 114.1 | 42.4 | 425.4 |
| Level of Service | F | F | F | F | F | F | F | C | F | F | D | F |
| Approach Delay (s) | | 617.9 | | | 333.9 | | | 98.0 | | | 81.3 | |
| Approach LOS | | F | | | F | | | F | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 236.3 | HCM Level of Service | F |
| HCM Volume to Capacity ratio | 1.28 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 150.0% | ICU Level of Service | H |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.97 | | 1.00 | 1.00 | | 1.00 | 0.97 | 0.91 | | 1.00 | 0.91 | 1.00 |
| Frt | 1.00 | | 0.85 | 1.00 | | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 5081 | | 1770 | 5085 | 1583 |
| Flt Permitted | 0.95 | | 1.00 | 0.95 | | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | | 1583 | 1770 | | 1583 | 3433 | 5081 | | 1770 | 5085 | 1583 |
| Volume (vph) | 505 | 0 | 265 | 9 | 0 | 10 | 93 | 1805 | 8 | 36 | 3978 | 122 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor (vph) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 85% | 100% | 100% | 85% | 100% |
| Adj. Flow (vph) | 505 | 0 | 265 | 9 | 0 | 10 | 93 | 1534 | 8 | 36 | 3381 | 122 |
| RTOR Reduction (vph) | 0 | 0 | 250 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 8 |
| Lane Group Flow (vph) | 505 | 0 | 15 | 9 | 0 | 0 | 93 | 1542 | 0 | 36 | 3381 | 114 |
| Turn Type | custom | | Over | custom | | Over | Prot | | | Prot | | Perm |
| Protected Phases | | | 5 | | | 1 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | 6 |
| Actuated Green, G (s) | 31.0 | | 10.8 | 31.0 | | 7.9 | 10.8 | 139.1 | | 7.9 | 136.2 | 136.2 |
| Effective Green, g (s) | 31.0 | | 10.8 | 31.0 | | 7.9 | 10.8 | 139.1 | | 7.9 | 136.2 | 136.2 |
| Actuated g/C Ratio | 0.16 | | 0.06 | 0.16 | | 0.04 | 0.06 | 0.73 | | 0.04 | 0.72 | 0.72 |
| Clearance Time (s) | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 560 | | 90 | 289 | | 66 | 195 | 3720 | | 74 | 3645 | 1135 |
| v/s Ratio Prot | | | 0.01 | | | 0.00 | c0.03 | c0.30 | | 0.02 | c0.66 | |
| v/s Ratio Perm | c0.15 | | | 0.01 | | | | | | | | 0.07 |
| v/c Ratio | 0.90 | | 0.17 | 0.03 | | 0.01 | 0.48 | 0.41 | | 0.49 | 0.93 | 0.10 |
| Uniform Delay, d1 | 78.0 | | 85.3 | 66.9 | | 87.3 | 86.9 | 9.8 | | 89.1 | 22.7 | 8.2 |
| Progression Factor | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 0.84 | 0.69 | 1.16 |
| Incremental Delay, d2 | 17.7 | | 0.9 | 0.0 | | 0.0 | 1.8 | 0.3 | | 0.5 | 0.6 | 0.0 |
| Delay (s) | 95.7 | | 86.2 | 66.9 | | 87.3 | 88.7 | 10.1 | | 74.9 | 16.3 | 9.5 |
| Level of Service | F | | F | E | | F | F | B | | E | B | A |
| Approach Delay (s) | | 92.4 | | | 77.7 | | | 14.6 | | | 16.7 | |
| Approach LOS | | F | | | E | | | B | | | B | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 26.1 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.91 | | |
| Actuated Cycle Length (s) | 190.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 95.1% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | Stop | | Free | | | Free |
| Grade | 0% | | 0% | | | 0% |
| Volume (veh/h) | 251 | 52 | 285 | 81 | 20 | 484 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 251 | 52 | 285 | 81 | 20 | 484 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | | | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | | | | 692 |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 850 | 326 | | | 366 | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 850 | 326 | | | 366 | |
| tC, single (s) | 6.4 | 6.2 | | | 4.1 | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | | | 2.2 | |
| p0 queue free % | 23 | 93 | | | 98 | |
| cM capacity (veh/h) | 326 | 716 | | | 1193 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 | SB 2 |
|---|---|---|---|---|
| Volume Total | 303 | 366 | 20 | 484 |
| Volume Left | 251 | 0 | 20 | 0 |
| Volume Right | 52 | 81 | 0 | 0 |
| cSH | 359 | 1700 | 1193 | 1700 |
| Volume to Capacity | 0.84 | 0.22 | 0.02 | 0.28 |
| Queue Length 95th (ft) | 193 | 0 | 1 | 0 |
| Control Delay (s) | 50.9 | 0.0 | 8.1 | 0.0 |
| Lane LOS | F | | A | |
| Approach Delay (s) | 50.9 | 0.0 | 0.3 | |
| Approach LOS | F | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 13.3 | | |
| Intersection Capacity Utilization | 49.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 10 | 91 | 0 | 0 | 236 | 28 | 8 | 12 | 0 | 14 | 1 | 6 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 10 | 91 | 0 | 0 | 236 | 28 | 8 | 12 | 0 | 14 | 1 | 6 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 101 | 264 | 20 | 21 |
| Volume Left (vph) | 10 | 0 | 8 | 14 |
| Volume Right (vph) | 0 | 28 | 0 | 6 |
| Hadj (s) | 0.05 | -0.03 | 0.11 | 0.00 |
| Departure Headway (s) | 4.3 | 4.1 | 4.8 | 4.7 |
| Degree Utilization, x | 0.12 | 0.30 | 0.03 | 0.03 |
| Capacity (veh/h) | 814 | 870 | 686 | 698 |
| Control Delay (s) | 7.9 | 8.8 | 8.0 | 7.8 |
| Approach Delay (s) | 7.9 | 8.8 | 8.0 | 7.8 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 8.5 | | |
| HCM Level of Service | A | | |
| Intersection Capacity Utilization | 24.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | | 0.97 | 0.95 | 1.00 | 0.97 | 0.91 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.98 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.99 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 3433 | 3472 | | 3433 | 3539 | 1583 | 3433 | 5019 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 3433 | 3472 | | 3433 | 3539 | 1583 | 3433 | 5019 | |
| Volume (vph) | 170 | 816 | 352 | 394 | 825 | 120 | 346 | 683 | 206 | 193 | 1207 | 114 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 170 | 816 | 352 | 394 | 825 | 120 | 346 | 683 | 206 | 193 | 1207 | 114 |
| RTOR Reduction (vph) | 0 | 0 | 301 | 0 | 10 | 0 | 0 | 0 | 193 | 0 | 10 | 0 |
| Lane Group Flow (vph) | 170 | 816 | 51 | 394 | 935 | 0 | 346 | 683 | 13 | 193 | 1311 | 0 |
| Turn Type | Prot | | Over | Prot | | | Prot | | Over | Prot | | |
| Protected Phases | 7 | 4 | 5 | 3 | 8 | | 5 | 2 | 3 | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 15.2 | 32.0 | 15.8 | 7.0 | 23.8 | | 15.8 | 44.3 | 7.0 | 10.7 | 39.2 | |
| Effective Green, g (s) | 15.2 | 32.0 | 15.8 | 7.0 | 23.8 | | 15.8 | 44.3 | 7.0 | 10.7 | 39.2 | |
| Actuated g/C Ratio | 0.14 | 0.29 | 0.14 | 0.06 | 0.22 | | 0.14 | 0.40 | 0.06 | 0.10 | 0.36 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 245 | 1030 | 227 | 218 | 751 | | 493 | 1425 | 101 | 334 | 1789 | |
| v/s Ratio Prot | c0.10 | 0.23 | 0.03 | c0.11 | c0.27 | | c0.10 | 0.19 | 0.01 | 0.06 | c0.26 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.69 | 0.79 | 0.22 | 1.81 | 1.24 | | 0.70 | 0.48 | 0.13 | 0.58 | 0.73 | |
| Uniform Delay, d1 | 45.2 | 35.9 | 41.7 | 51.5 | 43.1 | | 44.9 | 24.3 | 48.6 | 47.5 | 30.8 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 8.2 | 4.2 | 0.5 | 380.9 | 121.2 | | 4.5 | 1.2 | 0.6 | 2.4 | 2.7 | |
| Delay (s) | 53.4 | 40.2 | 42.2 | 432.4 | 164.3 | | 49.3 | 25.5 | 49.2 | 49.9 | 33.5 | |
| Level of Service | D | D | D | F | F | | D | C | D | D | C | |
| Approach Delay (s) | | 42.4 | | | 243.2 | | | 36.1 | | | 35.6 | |
| Approach LOS | | D | | | F | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 88.6 | HCM Level of Service | F |
| HCM Volume to Capacity ratio | 0.92 | | |
| Actuated Cycle Length (s) | 110.0 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 85.1% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Volume (veh/h) | 56 | 1185 | 1026 | 25 | 7 | 21 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 56 | 1185 | 1026 | 25 | 7 | 21 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | | None | |
| Median storage veh) | | | | | | |
| Upstream signal (ft) | | | 516 | | | |
| pX, platoon unblocked | 0.78 | | | | 0.78 | 0.78 |
| vC, conflicting volume | 1051 | | | | 1730 | 513 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 782 | | | | 1654 | 92 |
| tC, single (s) | 4.1 | | | | 6.8 | 6.9 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 91 | | | | 89 | 97 |
| cM capacity (veh/h) | 648 | | | | 63 | 738 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | SB 1 |
|---|---|---|---|---|---|---|---|
| Volume Total | 56 | 592 | 592 | 513 | 513 | 25 | 28 |
| Volume Left | 56 | 0 | 0 | 0 | 0 | 0 | 7 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 25 | 21 |
| cSH | 648 | 1700 | 1700 | 1700 | 1700 | 1700 | 202 |
| Volume to Capacity | 0.09 | 0.35 | 0.35 | 0.30 | 0.30 | 0.01 | 0.14 |
| Queue Length 95th (ft) | 7 | 0 | 0 | 0 | 0 | 0 | 12 |
| Control Delay (s) | 11.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 25.7 |
| Lane LOS | B | | | | | | D |
| Approach Delay (s) | 0.5 | | | 0.0 | | | 25.7 |
| Approach LOS | | | | | | | D |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.6 | | |
| Intersection Capacity Utilization | 45.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Volume (veh/h) | 47 | 1174 | 0 | 0 | 1085 | 16 | 0 | 0 | 38 | 3 | 0 | 38 |
| Peak Hour 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 |
| Hourly flow rate (vph) | 47 | 1174 | 0 | 0 | 1085 | 16 | 0 | 0 | 38 | 3 | 0 | 38 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 561 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.79 | | | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | |
| vC, conflicting volume | 1101 | | | 1174 | | | 1848 | 2369 | 587 | 1804 | 2353 | 542 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1101 | | | 958 | | | 1809 | 2465 | 218 | 1753 | 2445 | 542 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 93 | | | 100 | | | 100 | 100 | 94 | 92 | 100 | 92 |
| cM capacity (veh/h) | 630 | | | 566 | | | 34 | 22 | 623 | 38 | 23 | 484 |

| Direction, Lane # | EB 1 | EB 2 | EB 3 | WB 1 | WB 2 | WB 3 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|---|---|
| Volume Total | 47 | 587 | 587 | 542 | 542 | 16 | 38 | 41 |
| Volume Left | 47 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Volume Right | 0 | 0 | 0 | 0 | 0 | 16 | 38 | 38 |
| cSH | 630 | 1700 | 1700 | 1700 | 1700 | 1700 | 623 | 261 |
| Volume to Capacity | 0.07 | 0.35 | 0.35 | 0.32 | 0.32 | 0.01 | 0.06 | 0.16 |
| Queue Length 95th (ft) | 6 | 0 | 0 | 0 | 0 | 0 | 5 | 14 |
| Control Delay (s) | 11.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 11.2 | 21.3 |
| Lane LOS | B | | | | | | B | C |
| Approach Delay (s) | 0.4 | | | 0.0 | | | 11.2 | 21.3 |
| Approach LOS | | | | | | | B | C |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.8 | | |
| Intersection Capacity Utilization | 49.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.97 | | 1.00 | 0.93 | | 1.00 | 0.92 | | 1.00 | 0.95 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3419 | | 1770 | 3297 | | 1770 | 1711 | | 1770 | 1776 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3419 | | 1770 | 3297 | | 1770 | 1711 | | 1770 | 1776 | |
| Volume (vph) | 43 | 279 | 82 | 94 | 123 | 103 | 77 | 173 | 205 | 286 | 351 | 159 |
| Peak-hour factor, PHF | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 43 | 279 | 82 | 94 | 123 | 103 | 77 | 173 | 205 | 286 | 351 | 159 |
| RTOR Reduction (vph) | 0 | 26 | 0 | 0 | 82 | 0 | 0 | 35 | 0 | 0 | 12 | 0 |
| Lane Group Flow (vph) | 43 | 335 | 0 | 94 | 144 | 0 | 77 | 343 | 0 | 286 | 498 | 0 |
| Turn Type | Prot | | | Prot | | | Prot | | | Prot | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 5.0 | 15.5 | | 8.7 | 19.2 | | 7.9 | 37.1 | | 18.6 | 47.8 | |
| Effective Green, g (s) | 5.0 | 15.5 | | 8.7 | 19.2 | | 7.9 | 37.1 | | 18.6 | 47.8 | |
| Actuated g/C Ratio | 0.05 | 0.16 | | 0.09 | 0.20 | | 0.08 | 0.39 | | 0.19 | 0.50 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 92 | 553 | | 161 | 660 | | 146 | 662 | | 343 | 885 | |
| v/s Ratio Prot | 0.02 | c0.10 | | c0.05 | c0.04 | | 0.04 | 0.20 | | c0.16 | c0.28 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.47 | 0.61 | | 0.58 | 0.22 | | 0.53 | 0.52 | | 0.83 | 0.56 | |
| Uniform Delay, d1 | 44.2 | 37.4 | | 41.9 | 32.1 | | 42.2 | 22.5 | | 37.2 | 16.8 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 3.7 | 1.9 | | 5.3 | 0.2 | | 3.4 | 2.9 | | 15.8 | 2.6 | |
| Delay (s) | 47.9 | 39.2 | | 47.2 | 32.2 | | 45.6 | 25.4 | | 53.0 | 19.3 | |
| Level of Service | D | D | | D | C | | D | C | | D | B | |
| Approach Delay (s) | | 40.2 | | | 36.6 | | | 28.8 | | | 31.4 | |
| Approach LOS | | D | | | D | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 33.5 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.64 | | |
| Actuated Cycle Length (s) | 95.9 | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | 67.0% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

# Appendix E

## Responses to Comments on the Kaiser Draft Traffic Study

## Responses to Comments Received from Werner Gans on the Kaiser Site Access Study

Comment #1: Map on figure 1 & 8 (and other maps) does not show Quail going thru to Dunford. The exit at Lehigh allows both right turns and left turns, not just right turns as shown.

Hexagon Response to Comment #1: Yes, Quail Avenue does go through to Dunford Way. Right and left turns are allowed from the main Kaiser driveway on Lawrence Expressway. This is shown on all figures.

Comment #2: Pg 5. We who live in the neighborhood know how to avoid traffic lights and stop signs to reduce travel time. Therefore cut thru traffic will save time.

Hexagon Response to Comment #2: Trips within the neighborhood that are generated by residents are, by definition, not cut-through trips. These are trips with destinations within the neighborhood.

Comment #3: Pg 15. Four traffic lights within ½ mile is ridiculous for a major thoroughfare.

Hexagon Response to Comment #3: The new signal at Swallow/Homestead would be timed to work in coordination with the existing signals on Homestead Road.

Comment #4: Figure 5. Do you believe that the high traffic counts on Quail, Swallow, Lochinvar, Dunford & Marion are all due to local traffic?

Hexagon Response to Comment #4: Based on surveys conducted in the field, none of the traffic on these roadways is attributable to Kaiser cut-through traffic. Some residents have suggested that the neighborhood schools contribute a lot of traffic to the nearby streets.

Comment #5: Pg 17. Why would you expect that any of the people who made a u-turn at Lawrence would then go and cut through the neighborhood when they can go north on Lawrence and get there much faster?

Hexagon Response to Comment #5: Traffic making a u-turn at Lawrence generally is trying to get to Wolfe Road. The traffic study checked whether any traffic bound for Wolfe was cutting through the neighborhood.

Comment #6: Swallow Way and Forge Drive are private streets. Has the property owner & Cupertino agreed that Kaiser can use these for ever more?

Hexagon Response to Comment #6: We understand that Kaiser has permission to use these streets.

Comment #7: Pg 1. Did you see any right turn cheaters who turn right on both lanes when there is a green light on Homestead. I see that fairly often, and that's really dangerous.

Hexagon Response to Comment #7: It is legal to turn right on red from either lane.

Comment #8: Will the intended traffic light on Homestead and Swallow be for right turns and left turns only?

Hexagon Response to Comment #8: All movements – left, through, and right – will be possible from Swallow.

Comment #9: Where is the study for the traffic emanating from the new 100,000 sq ft office building on Tantau and the planned major expansion by Apple on Tantau and Pruneridge considered?

Hexagon Response to Comment #9: Future growth within the study area was addressed in the traffic study.

Comment #10: Did you follow any of the left turn cheaters to see where they went. It seems to me that they might be more likely to cut thru the neighborhood.

Hexagon Response to Comment #10: Observations conducted by Hexagon in March of 2009 show that no illegal left turns currently occur from the Kaiser driveway on Homestead Road.

Comment #11: Pg 12. Is channelization of the center lane possible or is it just a more expensive solution. The only left turns are at the Kaiser entrance/exit on Homestead and Quail and both have left turn pockets.

Hexagon Response to Comment #11: Channelization is possible but not practical. The cost was not investigated in this traffic study. Left turns along Homestead Road currently are possible at the Kaiser entrance, Swallow Drive, Quail Avenue/Tantau Avenue, Peacock Avenue (eastbound only), Leonard Avenue (westbound only), driveway between Leonard Avenue and Nightingale Avenue (westbound only), and Nightingale Avenue (eastbound only). With channelization, the left turns at Swallow Drive, Quail Avenue/Tantau Avenue and Peacock Avenue would be eliminated.

Comment #12: Pg 18. The report says putting another entrance/exit on the south side of Kaiser would put too much traffic into the Santa Clara neighborhood. Probably more than 75% of the property on Homestead is single family residential for Sunnyvale and Cupertino. Why is that different?

Hexagon Response to Comment #12: Homestead Road is defined as a major 4-lane arterial. Arterials are designed to handle a much higher volume of traffic and have higher speed limits than local residential streets. The streets within the southern neighborhood are local residential streets.

To: Mr. Jack Witthaus, Transportation & Traffic Manager, City of Sunnyvale

CC: Sunnyvale City Council
Mr. Gary Luebbers, Sunnyvale City Manager
Cody Kraatz, Sunnyvale Sun
Gary Richards, Mercury News' Mr. Roadshow
David J. Butler, Editor, Mercury News
A wide variety of Sunnyvale neighbors

From: Tap Merrick,
1091 Firth Court
Sunnyvale, CA 94087
408-984-2330

Subject: Kaiser Study Issue traffic study review

Date: March 29, 2009

Dear Mr. Witthaus,

I have taken the time to review the recent Kaiser Study Issue Traffic Study, as provided to me by Mr. Jack Witthaus, Sunnyvale's Transportation and Traffic Manager. I have noticed several problems with this traffic study, which I would like to share with you.

1. Hexagon Transportation Consultants, Inc. is the same company that prepared the glaringly erroneous traffic study for the City of Santa Clara's Santa Clara Square, as reviewed not only by myself, but also by the City of Sunnyvale and Santa Clara County. All three of us found glaring errors in this particular project, so much so that it ultimately resulted in the Santa Clara Square project being sent back to the drawing boards for review, where it remains in limbo. Given this recent history, any work performed by Hexagon requires significant microscopic review for quality and accuracy.

Hexagon Response: Rejection of the Santa Clara Square proposal was unrelated to the traffic report or traffic impacts.

2. One year ago Kaiser staff indicated to the City Council during a public Council Meeting that they had no idea as to what Kaiser-Permanente's plans were for the remaining acreage at their site, even though they had already built a quasi-permanent 400 car parking lot with ample lighting on the southwest corner of their 700 South Lawrence Expressway property. According to this current traffic study, Kaiser now plans to build a 175,000 square foot medical office building at some point in the future (date unknown to this author) plus add a signalized light at the corner of Swallow and Homestead to allow for patient and employee entrance and exit. So even though there is no building there yet, and plans demonstrate that there will be adequate driveway space for cars to

park around the backsides of this building, this study indicates that there would be no way an exit could be built out to Forge Drive. This just doesn't make any sense. Even if there wasn't space in their drawing, couldn't the unbuilt building be slightly redesigned, before construction begins, to allow for an exit road, which they will claim they will use to bring people in and out using this new signalized light? And according to page 3's Figure 2 Site Plan, there are plans to run an exit out to Forge Drive. This Figure 2 also seems to allow for space to build a road connecting the south end of the Kaiser facility and Hubbard Road, between the new planned medical office building and Calabasas Creek.

Hexagon Response: Kaiser plans to provide a driveway to and from the facility via Forge Drive. The traffic study includes an analysis of the driveway to Forge Drive. A southern access near Calabasas Creek is not planned.

3. If indeed the signalized light that this study indicates Kaiser plans to install (at whose expense?) at Swallow and Homestead is a fait accompli, then why is the current light one block away at the existing Kaiser Homestead exit even being discussed? Surely the City of Sunnyvale wouldn't have or want four stop lights operating in such a short distance? The old Kaiser facility on Kiely in Santa Clara required only one stop light (and nine exits) and that was at Kiely and Kaiser Road. The Swallow and Homestead intersection seems to be at the boundaries of Santa Clara, Cupertino and Sunnyvale. Which City controls the middle, and thus controls whether a signalized light will be installed there? As Sunnyvale controls the signalized light now in question, I would assume that it also would control any signalized light at Swallow and Homestead. Unfortunately, this study does not address this question.

Hexagon Response: With approval of the additional 175,000 s.f. of medical office space (full buildout of the facility), Kaiser was required by the City of Santa Clara to construct a new traffic signal at Swallow Drive/Homestead Road. It is not known at this time which City would control the signal. The Swallow Drive/Homestead Road intersection is shared between the Cities of Sunnyvale, Santa Clara and Cupertino. There would not be a traffic problem created by adding a signal at Swallow Drive.

4. Given that Kaiser plans to continue using Forge Drive for its own benefit (page 8) connecting its Memory Clinic and the main facility (and verified by this study's own observation) and plans to utilize Swallow as an exit, then what is preventing Kaiser from currently utilizing the Forge Drive exit for patients also?

Hexagon Response: Currently there is not a paved roadway connection between the main hospital area and Forge Drive. Kaiser plans to add this connection in the future. Forge Drive and Swallow Drive will be used by employees and patients/visitors.

5. This Traffic Study identified several cut-through streets from Homestead Road to Wolfe Road. It is my personal belief that Hexagon's findings are probably accurate. However, I

have personally noticed up to three cars in a row cutting through by crossing Wolfe on Inverness to Nightingale to Homestead to avoid the wait for a left turn light on some of my daily walks through the neighborhood. What is missing from the Hexagon study is any mention of a northern cut-through route. Item 6 addresses this question.

6. In previous e-mails to the City Council regarding cut-through traffic I stated that I had conducted my own travel time runs between Kaiser and Henderson Avenue. Route A, passing through 8 stop lights, would go from Kaiser (at Homestead) east to Lawrence Expressway, turn left onto Lawrence Expressway headed north, and get off at El Camino Real, turning west to Henderson. Route B would leave the Homestead exit at Kaiser, turn right onto Swallow, merge left onto Lochinvar, turn right at Dunford, left at Teal, left again at Castleton Way, right at the end onto Sage Hen, left onto Bryant, then right onto Henderson. Route C would mimic Route B, except that once the driver reached Inverness/Teal, they would turn right at that point. Most people would avoid Route C as there is a deep drainage gutter just before Dunford, causing many cars to hit bottom and potentially damaging their cars. Both Routes B and C only pass through two stop lights, one at the Kaiser exit and the other at Henderson and El Camino Real. My results, conducted on a dry Sunday morning, reflected that Route B was faster than Route A by about 1 minute. I speculated that Route B would be significantly faster than Route A during rush hours, especially in the 4 to 6 PM time frame. Hexagon, in its infinite wisdom chose to omit this option in its Traffic Study.

Hexagon Response: In the traffic study no Kaiser site traffic was observed to cut through the Birdland neighborhood, either via this route or on any other cut-through route.

7. Page 12 of the Traffic Study made the erroneous assumption that ½ of all Kaiser traffic would exit either south or west, if permitted to. It is amazing that Hexagon had the ability to approach Kaiser and seek a breakdown of Santa Clara Kaiser members who lived in each of the neighboring cities, yet failed to do so. A statistical review of this data would much more clearly identify how many people would likely utilize each exit. One of the problems with Hexagon's assumption is that it ignores the fact that Kaiser members tend to be somewhat disproportionately in lower income brackets, which indicates that, per capita, Sunnyvale and Santa Clara tend to house more Kaiser members than Cupertino or Saratoga. Reasons for this vary, but can be primarily attributed to Kaiser's lower competitive fee structure and the perceived lack of quality care, primarily stemming from decades old issues with not being able to choose one's own personal physician. Should Kaiser conduct a survey of its members, I believe that it would learn several things. Cupertino residents living near or south of Bollinger Road, yet west of Lawrence up to Stelling would tend to take the Lawrence Expressway Kaiser exit to go home, as would most all San Jose, Saratoga and Campbell residents. Except for the few residents living just south of Kaiser, all Santa Clara residents would exit using either of the two existing exits. Clearly, Santa Clara residents living just south of the hospital would use a southern exit, if it existed. Cupertino residents (north of Bollinger from Lawrence to Stelling and along Route 85), as well as Mountain View and Palo Alto residents may be inclined to utilize a southern route, the western route or just as

equally Lawrence Expressway (taking Lawrence to I-280) to get home. Sunnyvale residents living west of Kaiser would utilize the western exit, as would many of those living northwest of the facility. Sunnyvale residents living north of the hospital, primarily east of Wolfe, would use one of three routes home, Lawrence Expressway, Wolfe Road or cut-through Route B previously identified. A detailed statistical review would better identify exactly how many members are likely to utilize which routes throughout any given day rather than the currently totally arbitrary method being utilized by Hexagon.

Hexagon Response: The traffic report does not state that ½ of all Kaiser traffic would utilize potential new driveways to the west or south. The report states that it was estimated that about ½ of the existing Kaiser trips that are to and from the south (via Lawrence Expressway, Pruneridge Avenue, and Tantau Drive) and the west (via Homestead Road, Wolfe Road, and Pruneridge Avenue) would utilize the southern and western driveways.

8. After conducting a proper survey of member resident locations, a better review of appropriate traffic exiting each alternative could be conducted for each alternative, including the three southern options. The Traffic Study did differentiate between the three streets' (Hillsdale, Giannini and Hubbard) traffic counts, but the Study's assumption was that traffic could increase by up to 10 fold. Tenfold for the 150 cars is still less than the 1,500 car maximum recommended for Sunnyvale residential streets, whereas tenfold to the 400 vehicle street brings it to 4,000 cars per day. By making such a sweeping, highly general and very misleading statement, Hexagon is obviously attempting to sway the Council towards Kaiser's way of thinking. This is contrary to the City Council's direction that this Study Issue was to be totally unbiased.

Hexagon Response: The traffic study states that a ten-fold increase in traffic would be noticeable to residents. This fact should be considered when evaluating a southern access.

9. Page iii of the Executive Summary, paragraph three states, "Currently, between 30 and 80 cars are turning left illegally onto westbound Homestead Road from the Kaiser site driveway per hour, depending on the time of day." Page 12 of the Study disagrees with that statement, as follows, "Based on surveys conducted of the Kaiser driveway on Homestead Road on March 18, 2009 from 2:00 PM to 6:00 PM, no cars were observed turning left from the Kaiser driveway onto westbound Homestead Road." The later statement by Hexagon approximates Birdland neighbors observations as they frequently drive by this driveway. I have personally never seen anyone making this illegal left turn, and two other neighbors have indicated that they have each seen only one person doing this. Clearly at some point either people have made illegal left turns as the flexible posts that were initially installed are no longer there, or Kaiser staff, at someone's direction, intentionally knocked them down. Similar posts put up farther down Homestead west of Tantau/Quail have remained relatively intact for 30 years to discourage people from turning left into the neighborhood by crossing Homestead. In any case, while this illegal activity may rarely occur, placing more permanent barriers as Sunnyvale was doing on

March 27, 2009 at the driveway should certainly significantly reduce any temptation to turn left.

10. In support of Hexagon's first statement about 30 to 80 illegal left turns per hour quoted above in item 8, Hexagon apparently referred to an April, 2008 traffic study conducted by Fehr & Peers for the Santa Clara medical facility. It is my belief that this Fehr & Peers study was hired by Kaiser, paid by Kaiser and given direction to find significantly in favor of Kaiser on this issue. As a former consultant, I am well aware of the tricks that consultants and companies play to predetermine an outcome favorable to the company paying the bill. Kaiser-Permanente, with $1.5 Billion in operating income each of the past two years, is not above playing dirty tricks to get its way, as the City Council has seen with Kaiser staff sending out e-mails encouraging Sunnyvale members to press their council for a speedy resolution when it was Kaiser staff that postponed payment for the study issue for over six months, or lying to the Council denying a verbal agreement with residents regarding the scope of the study.
11. Hexagon dismisses Hexagon's own findings by stating on page 12, "We believe this is due (the zero illegal left turns Hexagon's study found) mostly to the recent enforcement measures that have been taken by the City of Sunnyvale to eliminate illegal left turns." Yet Hexagon fails to offer any comparative statistics for 2007, 2008 or 2009 from Sunnyvale Public Safety to support its statement. This page 12 paragraph continues to argue that, "Existing signage, as well as two flashing beacons, clearly show that left-turns are prohibited from this driveway." As if this is now what is keeping people from making illegal left turns. This "existing signage" has been there for quite a while, even before the Fehr & Peers study was conducting in 2008.

Hexagon Response: A previous traffic study prepared by Fehr & Peers contains 2007 counts for the Kaiser Driveway on Homestead Road. Those counts show that illegal left turns were occurring in 2007. Recent observations conducted by Hexagon in March of 2009 show that no illegal left turns currently occur. Enforcement measures have been implemented since the 2007 counts were conducted that are preventing vehicles from making illegal left turns from the Kaiser facility onto westbound Homestead Road.

12. Page 7 under the Roadway Segments section of this study states that "the volume threshold for local residential streets to be 1,500 vehicles per day…" which is attributed to the same Fehr & Peers study mentioned in Item 11, above. While I would have felt more comfortable utilizing the City of Sunnyvale's definition, Lochinvar, with this study's average daily traffic count at 1,710 cars per day already far exceeds the 1,500 vehicles per day Fehr & Peers as well as Hexagon are comfortable with. So what makes Lochinvar any different than Hillsdale, Giannini or Hubbard? All three streets are approximately the same width, they are all in a single family neighborhood, and oh yes, those three are all in Santa Clara, which is where Kaiser is located.

Hexagon Response: Regardless of the advisable traffic limit on residential streets, the point of the traffic study is that allowing left turns from the Kaiser driveway onto Homestead Road

would not increase traffic volumes within the Birdland neighborhood. Adding a southern access driveway would significantly increase volumes within the southern neighborhood.

13. As many Santa Clara residents, even those living outside of Birdland East, drive their children to Laurelwood Elementary School on Teal and Peterson Middle School on Bryant, and the former Patrick Henry School on Dunford which has some five separate schools that it serves, I suggest that further traffic counts be undertaken at Dunford (at the Teal stop sign between Lochinvar and Teal), Lochinvar (between Inverness and Dunford), and Teal (between Dunford and Lillick).
14. Laurelwood Elementary School, in particular, generates a circular traffic flow, with parents traveling south down Lochinvar and turning left onto Teal, where they can then drop off (or pick up) their children on the right side of the street before continuing on their way.
15. This traffic study fails to even acknowledge future planned growth in the City of Santa Clara that will dramatically affect traffic in Sunnyvale's Birdland East neighborhood and Homestead Road. Santa Clara Square, a 490 housing and street level business complex located at El Camino Real and Lawrence Expressway, is still on the City of Santa Clara's General Plan Housing Element, as revised and up for approval this Spring. This development will place an even greater strain on Sunnyvale street traffic as up to 1,000 more cars per day will be driving down Lochinvar, Teal and Dunford twice a day to see that their children are transported safely to and from school. Other potential locations that may well be subject to redevelopment are the two underutilized shopping centers at Lawrence Expressway and Homestead Road in Santa Clara. Slightly more removed, although potentially affecting cut-through traffic in Birdland East as well as daily traffic on Lawrence Expressway and Homestead are the 300+ housing unit complex at Marina Playa currently under construction on Lawrence Expressway, and the two northern corners of Lawrence Expressway and El Camino Real, which are both planned for 500+ housing units, with businesses on the first floor.
16. This traffic study also fails to address potential traffic coming from Apple's new 50 acre campus in Cupertino to be built in the next several years at Stevens Creek and Tantau.

Hexagon Response: Future growth within the study area was addressed in the traffic study.

In summary, Hexagon did not do a good job on this Traffic Study. They often took someone else's word for data rather than do the work themselves. They even refuted their own findings by deferring to a clearly biased study prepared at Kaiser's request for Kaiser's benefit. Hexagon made absolutely no effort to accurately determine what sort of traffic might use southern and western exits, but rather simply divided by four. The best number Hexagon could determine the southern traffic to be was up to 10 times the existing amount, which ranged from 150 to 400 cars per day. So which is it, 1,500 or 4,000 cars per day? In my opinion this is not very accurate. A reason was never given why Forge Drive couldn't be used as a west bound exit, even with Kaiser's new plan, which shows an exit directly out to Forge Drive. The traffic counts and cut-through arguments looked at the wrong streets. They obviously failed to review letters and e-mails submitted to the Sunnyvale City Council which identified these problems.

Clearly the City of Santa Clara and Kaiser-Permanente were pretty dumb to approve a huge hospital and medical office buildings at the corner of Lawrence Expressway and Homestead Road. What made either one of them think that they would be able to control traffic with only one and a half exits, when the old Kaiser facility had 9 exits? While I feel sorry for their stupidity, clearly they have both gotten themselves into this mess, and need to find a way out that doesn't impact our Birdland East neighborhood any more than it already has. In fact, Santa Clara's development efforts at places such as Santa Clara Square only compound Kaiser's problems by infuriating our neighborhood to the point of coordinated active resistance. As evidenced by the fact that Lochinvar is already 13% over the recommended maximum for residential street traffic, clearly it's time for Santa Clara and Cupertino to share some of the traffic load. Even one more car is already too many on Lochinvar, and with the likelihood of more cut-through traffic heading towards Henderson and points north in Sunnyvale, the burden is unacceptable.

The Sunnyvale Birdland neighbors never wanted Kaiser to build at this current spot. As a concession to Kaiser, we agreed to support Kaiser's plans, as long as there was no left turn allowed out of Kaiser onto Homestead Road. We didn't want the extra traffic on either Lawrence or Homestead. We didn't want the two extra stop lights at Lehigh and the Kaiser-Homestead exit. We didn't want ambulance sirens blaring through the night. We didn't want helicopters landing and taking off. And we certainly don't want any more cut-through traffic than already exists. Other Sunnyvale residents should be pleased that they are now ten minutes closer to Kaiser than they were when the hospital was located at Kiely in Santa Clara, thus saving Sunnyvale member residents some twenty minutes per trip in traveling time. A two minute u-turn delay is a fair price to pay for gaining 18 minutes of personal time, even if it may not seem to make any sense. It actually does.

What Kaiser needs to do is go back to the City of Santa Clara and succeed in opening up a southern exit, as well as formalizing Forge Drive as their western exit. Then install signs directing their members as to which exit will take the members to the easiest route home.

And finally, if I were the City of Sunnyvale, I'd ask Hexagon for my money back. You didn't get a good unbiased report.

> > From: Ken Olevson <kenolevson@earthlink.net>
> > Subject: RE: How to stop Kaiser
> > To: tapmerrick@yahoo.com,

Good Morning Tap,
First, thank you for your thoughtful review of the report by Hexagon. I offer some comments to the report that I believe augments your comments. In my reading of the report, I find what I believe to be logical errors several times.

1. Software: "Synchro" software is apparently well known and approved by professionals in the traffic management area (for background information see TRANSPORTATION RESEARCH BOARD/NATIONAL RESEARCH COUNCIL, Circular Number E-CO14, Traffic Analysis Software Tools, September 2000 and Vermont Agency for Transportation,Circ-Williston EIS -Traffic Analysis Methods and Software for Detailed Analysis). Its primary use and focus is for timing traffic signals and is secondarily used for the purpose in this report. The report is based in large measure on the results emanating from the software analysis tool. However, when the software in this report does not support their recommendations (report page 15), they dismiss this as function of the methodology and follow up with a narrative explaining away the result. If the software produces erroneous results that are identifiable and obvious, why should it be trusted when it supports their argument but the result is not so easily validated by observation or reasoning?

Hexagon Response: Synchro is based on the 2000 Highway Capacity Manual methodology, which is the method for determining intersection level of service that has been adopted by all Cities within Santa Clara County. The explanation of the intersection level of service results was included to explain why the result was different than what might initially be expected, since one would expect the average delay to decrease (improve) when taking away volume. The following is text taken directly from the traffic study: "Because the Synchro average control delay is a weighted calculation, subtracting trips from the turning movements that are operating well actually results in a higher calculated average vehicle delay for the intersection as a whole. In reality, however, providing additional south and west access to the Kaiser site would not have a negative effect on the operation of the Kaiser driveway/Homestead Road intersection, but would instead improve overall traffic circulation to and from the Kaiser site. This intersection would operate at an acceptable LOS C under all of the site access alternatives."

2. Traffic Volume Increases: The 34% expansion in floor space at the facility adds 175,000 square feet to the current total of 520,000 square feet. The 520,000 square feet appears approximately 1/2 MOB and 1/2 Hospital. My personal observations in frequently visiting the MOB transporting my in-laws, is that the MOB receives substantially more traffic than the Hospital. Therefore, the 34% expansion will increase the traffic much more than the 34% associated with the increase in square footage. I question whether the manual "Trip Generation,8th edition (2008) factors in this change.

Hexagon Response: The rates that were used to estimate future traffic from the medical office buildings (MOBs) were MOB rates, not hospital rates, and were taken directly from

the ITE Trip Generation Manual, 8th Edition. The existing hospital driveway counts were not used in the trip generation estimate for the reasons specified in this comment.

3. Reference to the 2008 Kaiser Traffic Report: The current report relies heavily on the report prepared in 2008 for volume of traffic, left turn effects, etc., yet the prior report is not appended for inclusion and analysis. We therefore must take it on faith that the earlier report was fully validated and unbiased. This is poor scientific method. Reference to the earlier report is valid, but where much of the data for the current report is dependent upon the earlier report, it should have been appended. Omission of critical data upon which they base their conclusions makes all results suspect.

Hexagon Response: Some of the existing count data contained in the 2008 traffic report prepared by Fehr & Peers was used for the 2009 Hexagon traffic study. The count data was validated by Hexagon and the City of Sunnyvale.

4. "It is estimated": This term is used throughout the report with no justification for the basis for the estimation. The report writer then builds scenarios based on this estimation that support or don't support the particular outcome. Unsupported estimations invalidated the result argued.

Hexagon Response: The traffic study explains that future traffic projections are based on existing traffic volumes and travel patterns.

5. Additional Traffic Signal Controls at Swallow:
When the proposed expansion is complete (adding new MOB) and the Swallow /Homestead light is installed, will the signals at Quail/Tantau, Swallow and Kaiser/Homestead be timed for each other and with the Homestead/Lawrence intersections? If so, does Sunnyvale pay for this ongoing expense. If they are timed with each other and with Homestead/Lawrence, do East/West travelers wait at Quail, Swallow and Kaiser while commute hour preference is given to North/South Lawrence traffic. If so, where is the time advantage to adding the left turn at Kaiser driveway?

Hexagon Response: The new signal at Swallow/Homestead would be timed to work in coordination with the existing signals on Homestead Road.

6. Traffic Growth Forecast: The report uses a "generally used" 1% annual growth rate to estimate future traffic in Santa Clara County. However, this is a medical facility designed to serve a dramatically aging population - e.g., adding outpatient Medical Office Building suites, not more hospital space. I believe it is logical to expect (not "it is estimated") that traffic in and around the facility will increase at a faster rate than general traffic patterns throughout the county based upon the needs of the aging population. This report does not address the non-linear rate of usage increase that could be expected from changing demographics, and therefore, I believe, underestimates the traffic increase that the current facility will develop as well as underestimates the result from the planned expansion.

Hexagon Response: An EIR was prepared for full buildout of the Kaiser facility. As required by CEQA, the EIR included a cumulative scenario that looked at all traffic growth around the facility. The main purpose of the Hexagon study was to determine the effects of allowing left turns from the Kaiser site, whether allowing the left turn would result in neighborhood (Birdland) cut-through traffic, and how the general traffic circulation patterns might change with the addition of western and southern access points.

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7. Adding pedestrian walkways: The report notes that new signals may
require pedestrian walkways.  This would also add time to each signal
for pedestrians to cross the street and detracting from the alleged
time improvements by adding a left turn signal.  After noting this
option, it is dismissed by lack of discussion.
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Hexagon Response: There is already a pedestrian signal and crosswalk at the Kaiser driveway on Homestead Road. For safety considerations, Hexagon recommended providing a separate pedestrian phase at this location in order to avoid conflicts between pedestrians crossing Homestead and motor vehicles should left turns from the driveway be allowed in the future. Ultimately, a separate pedestrian phase may not be necessary depending on the left turn volume and the number of pedestrians crossing Homestead Road. The City will determine what is necessary at this location, and it will be incorporated into the ultimate intersection design.