

Queues

1: SW 12th Avenue & Hillsboro Blvd


























| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|-------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 277 | 2092 | 321 | 1413 | 473 | 98 | 147 | 196 | 22 | 22 | 22 |
| v/c Ratio | 0.88 | 0.67 | 0.96 | 0.52 | 0.43 | 0.27 | 0.74 | 0.38 | 0.28 | 0.28 | 0.06 |
| Control Delay | 92.0 | 22.1 | 104.4 | 18.8 | 5.9 | 66.2 | 90.7 | 7.8 | 81.9 | 81.4 | 0.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 92.0 | 22.1 | 104.4 | 19.0 | 6.0 | 66.2 | 90.7 | 7.8 | 81.9 | 81.4 | 0.3 |
| Queue Length 50th (ft) | 282 | 491 | 172 | 241 | 75 | 49 | 152 | 0 | 24 | 24 | 0 |
| Queue Length 95th (ft) | #430 | 639 | #278 | 280 | 90 | 77 | 224 | 64 | 57 | 57 | 0 |
| Internal Link Dist (ft) | | 580 | | 548 | | | 436 | | | 396 | |
| Turn Bay Length (ft) | 450 | | 375 | | 350 | 225 | | 250 | 200 | | |
| Base Capacity (vph) | 335 | 3103 | 336 | 2737 | 1263 | 686 | 372 | 514 | 283 | 291 | 399 |
| Starvation Cap Reductn | 0 | 0 | 0 | 422 | 145 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.83 | 0.67 | 0.96 | 0.61 | 0.42 | 0.14 | 0.40 | 0.38 | 0.08 | 0.08 | 0.06 |

Intersection Summary

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

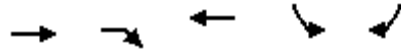
HCM Signalized Intersection Capacity Analysis

1: SW 12th Avenue & Hillsboro Blvd

| |  |  |  |  |  |  |  |  |  |  |  |  | |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|------|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations |  |  | |  |  |  |  |  |  |  |  |  | |
| Traffic Volume (vph) | 255 | 1760 | 165 | 295 | 1300 | 435 | 90 | 135 | 180 | 30 | 10 | 20 | |
| Future Volume (vph) | 255 | 1760 | 165 | 295 | 1300 | 435 | 90 | 135 | 180 | 30 | 10 | 20 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Total Lost time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | 4.0 | 6.0 | 6.0 | 6.5 | 6.0 | 6.0 | 6.5 | |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.91 | 1.00 | 0.97 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | |
| Frt | 1.00 | 0.99 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.98 | 1.00 | |
| Satd. Flow (prot) | 1770 | 5020 | | 3433 | 5085 | 1583 | 3433 | 1863 | 1583 | 1681 | 1726 | 1583 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.98 | 1.00 | |
| Satd. Flow (perm) | 1770 | 5020 | | 3433 | 5085 | 1583 | 3433 | 1863 | 1583 | 1681 | 1726 | 1583 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | |
| Adj. Flow (vph) | 277 | 1913 | 179 | 321 | 1413 | 473 | 98 | 147 | 196 | 33 | 11 | 22 | |
| RTOR Reduction (vph) | 0 | 4 | 0 | 0 | 0 | 127 | 0 | 0 | 158 | 0 | 0 | 17 | |
| Lane Group Flow (vph) | 277 | 2088 | 0 | 321 | 1413 | 346 | 98 | 147 | 38 | 22 | 22 | 5 | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | |
| Turn Type | Prot | NA | | Prot | NA | pm+ov | Split | NA | pm+ov | Split | NA | pm+ov | |
| Protected Phases | 1 | 6 | | 5 | 2 | 3 | 4 | 4 | 5 | 3 | 3 | 1 | |
| Permitted Phases | | | | | | 2 | | | 4 | | | 3 | |
| Actuated Green, G (s) | 26.4 | 96.8 | | 13.7 | 84.1 | 91.6 | 17.0 | 17.0 | 30.7 | 7.5 | 7.5 | 33.9 | |
| Effective Green, g (s) | 28.4 | 98.8 | | 15.7 | 86.1 | 95.6 | 17.0 | 17.0 | 30.7 | 7.5 | 7.5 | 33.9 | |
| Actuated g/C Ratio | 0.18 | 0.62 | | 0.10 | 0.54 | 0.60 | 0.11 | 0.11 | 0.19 | 0.05 | 0.05 | 0.21 | |
| Clearance Time (s) | 6.5 | 6.5 | | 6.5 | 6.5 | 6.0 | 6.0 | 6.0 | 6.5 | 6.0 | 6.0 | 6.5 | |
| Vehicle Extension (s) | 1.5 | 3.0 | | 2.0 | 3.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.5 | |
| Lane Grp Cap (vph) | 314 | 3099 | | 336 | 2736 | 945 | 364 | 197 | 303 | 78 | 80 | 335 | |
| v/s Ratio Prot | c0.16 | c0.42 | | 0.09 | 0.28 | c0.02 | 0.03 | c0.08 | 0.01 | 0.01 | 0.01 | 0.00 | |
| v/s Ratio Perm | | | | | | 0.20 | | | 0.01 | | | 0.00 | |
| v/c Ratio | 0.88 | 0.67 | | 0.96 | 0.52 | 0.37 | 0.27 | 0.75 | 0.12 | 0.28 | 0.28 | 0.01 | |
| Uniform Delay, d1 | 64.2 | 20.0 | | 71.8 | 23.6 | 16.6 | 65.8 | 69.4 | 53.5 | 73.6 | 73.6 | 49.8 | |
| Progression Factor | 1.00 | 1.00 | | 0.97 | 0.73 | 0.93 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 23.4 | 1.2 | | 34.0 | 0.6 | 0.1 | 0.1 | 12.6 | 0.1 | 0.7 | 0.7 | 0.0 | |
| Delay (s) | 87.5 | 21.2 | | 103.5 | 17.9 | 15.6 | 65.9 | 82.0 | 53.6 | 74.4 | 74.3 | 49.8 | |
| Level of Service | F | C | | F | B | B | E | F | D | E | E | D | |
| Approach Delay (s) | | 29.0 | | | 29.9 | | | 65.8 | | | 66.2 | | |
| Approach LOS | | C | | | C | | | E | | | E | | |
| Intersection Summary | | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 33.0 | | | | | | | | | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | | | 0.74 | | | | | | | | | | |
| Actuated Cycle Length (s) | | | 160.0 | | | | | | | | | Sum of lost time (s) | 23.0 |
| Intersection Capacity Utilization | | | 72.0% | | | | | | | | | ICU Level of Service | C |
| Analysis Period (min) | | | 15 | | | | | | | | | | |
| c | Critical Lane Group | | | | | | | | | | | | |

Queues

2: Hillsboro Bvd & I-95 SB RAMP



| Lane Group | EBT | EBR | WBT | SBL2 | SBR |
|-------------------------|------|------|------|------|------|
| Lane Group Flow (vph) | 1380 | 737 | 1462 | 542 | 721 |
| v/c Ratio | 0.27 | 0.47 | 0.50 | 0.82 | 0.69 |
| Control Delay | 0.1 | 2.0 | 16.2 | 55.4 | 45.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 0.1 | 2.0 | 16.2 | 55.4 | 45.4 |
| Queue Length 50th (ft) | 0 | 10 | 257 | 509 | 360 |
| Queue Length 95th (ft) | 0 | 7 | 294 | 583 | 384 |
| Internal Link Dist (ft) | 548 | | 319 | | |
| Turn Bay Length (ft) | | 150 | | | |
| Base Capacity (vph) | 5085 | 1583 | 2900 | 890 | 1402 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.27 | 0.47 | 0.50 | 0.61 | 0.51 |

Intersection Summary

HCM Signalized Intersection Capacity Analysis

2: Hillsboro Bvd & I-95 SB RAMP



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
|------------------------|------|-------|-------|------|-------|------|-------|------|------|------|------|
| Lane Configurations | | ↑↑↑ | ↑ | | ↑↑↑ | | ↑ | | ↑↑ | | |
| Traffic Volume (vph) | 0 | 1270 | 700 | 0 | 1345 | 0 | 515 | 0 | 685 | 0 | 0 |
| Future Volume (vph) | 0 | 1270 | 700 | 0 | 1345 | 0 | 515 | 0 | 685 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 2.0 | 2.0 | | 4.5 | | 4.5 | | 4.5 | | |
| Lane Util. Factor | | 0.91 | 1.00 | | 0.91 | | 1.00 | | 0.88 | | |
| Frt | | 1.00 | 0.85 | | 1.00 | | 1.00 | | 0.85 | | |
| Flt Protected | | 1.00 | 1.00 | | 1.00 | | 0.95 | | 1.00 | | |
| Satd. Flow (prot) | | 5085 | 1583 | | 5085 | | 1770 | | 2787 | | |
| Flt Permitted | | 1.00 | 1.00 | | 1.00 | | 0.95 | | 1.00 | | |
| Satd. Flow (perm) | | 5085 | 1583 | | 5085 | | 1770 | | 2787 | | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.95 | 0.92 | 0.92 | 0.92 | 0.95 | 0.92 | 0.95 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 1380 | 737 | 0 | 1462 | 0 | 542 | 0 | 721 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 1380 | 737 | 0 | 1462 | 0 | 542 | 0 | 721 | 0 | 0 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% |
| Turn Type | | NA | Perm | | NA | | Prot | | Prot | | |
| Protected Phases | | Free! | | | 2 | | 8! | | 3 | | |
| Permitted Phases | | | Free | | | | | | | | |
| Actuated Green, G (s) | | 160.0 | 160.0 | | 89.3 | | 57.7 | | 57.7 | | |
| Effective Green, g (s) | | 160.0 | 160.0 | | 91.3 | | 59.7 | | 59.7 | | |
| Actuated g/C Ratio | | 1.00 | 1.00 | | 0.57 | | 0.37 | | 0.37 | | |
| Clearance Time (s) | | | | | 6.5 | | 6.5 | | 6.5 | | |
| Vehicle Extension (s) | | | | | 3.0 | | 2.5 | | 2.5 | | |
| Lane Grp Cap (vph) | | 5085 | 1583 | | 2901 | | 660 | | 1039 | | |
| v/s Ratio Prot | | 0.27 | | | c0.29 | | c0.31 | | 0.26 | | |
| v/s Ratio Perm | | | 0.47 | | | | | | | | |
| v/c Ratio | | 0.27 | 0.47 | | 0.50 | | 0.82 | | 0.69 | | |
| Uniform Delay, d1 | | 0.0 | 0.0 | | 20.7 | | 45.3 | | 42.4 | | |
| Progression Factor | | 1.00 | 1.00 | | 0.71 | | 1.00 | | 1.00 | | |
| Incremental Delay, d2 | | 0.1 | 0.8 | | 0.6 | | 7.9 | | 1.9 | | |
| Delay (s) | | 0.1 | 0.8 | | 15.2 | | 53.3 | | 44.3 | | |
| Level of Service | | A | A | | B | | D | | D | | |
| Approach Delay (s) | | 0.3 | | | 15.2 | | | 48.1 | | 0.0 | |
| Approach LOS | | A | | | B | | | D | | A | |

Intersection Summary

| | | | |
|-----------------------------------|-------|---------------------------|-----|
| HCM 2000 Control Delay | 17.3 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.63 | | |
| Actuated Cycle Length (s) | 160.0 | Sum of lost time (s) | 9.0 |
| Intersection Capacity Utilization | 57.5% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

! Phase conflict between lane groups.

c Critical Lane Group

Queues

3: I-95 NB Ramp & Hillsboro Blvd















| Lane Group | EBT | WBT | WBR | NBL | NBR |
|-------------------------|------|------|------|------|------|
| Lane Group Flow (vph) | 1353 | 1571 | 772 | 554 | 779 |
| v/c Ratio | 0.49 | 0.56 | 0.49 | 0.30 | 0.73 |
| Control Delay | 11.2 | 9.6 | 1.8 | 17.7 | 24.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 11.2 | 9.6 | 1.8 | 17.7 | 24.4 |
| Queue Length 50th (ft) | 152 | 163 | 31 | 66 | 172 |
| Queue Length 95th (ft) | 201 | m174 | m3 | 84 | 224 |
| Internal Link Dist (ft) | 286 | 371 | | | |
| Turn Bay Length (ft) | | | 250 | 350 | 350 |
| Base Capacity (vph) | 2785 | 2785 | 1568 | 2120 | 1212 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.49 | 0.56 | 0.49 | 0.26 | 0.64 |

Intersection Summary

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













HCM Signalized Intersection Capacity Analysis

3: I-95 NB Ramp & Hillsboro Blvd

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | ↑ | ↑↑↑ | | ↑↑ | | | |
| Traffic Volume (vph) | 0 | 1245 | 0 | 0 | 1445 | 710 | 510 | 0 | 740 | 0 | 0 | 0 |
| Future Volume (vph) | 0 | 1245 | 0 | 0 | 1445 | 710 | 510 | 0 | 740 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 4.5 | | | 4.5 | 2.0 | 2.0 | | 2.0 | | | |
| Lane Util. Factor | | 0.91 | | | 0.91 | 1.00 | 0.94 | | 0.88 | | | |
| Frt | | 1.00 | | | 1.00 | 0.85 | 1.00 | | 0.85 | | | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | | 1.00 | | | |
| Satd. Flow (prot) | | 5085 | | | 5085 | 1568 | 4990 | | 2787 | | | |
| Flt Permitted | | 1.00 | | | 1.00 | 1.00 | 0.95 | | 1.00 | | | |
| Satd. Flow (perm) | | 5085 | | | 5085 | 1568 | 4990 | | 2787 | | | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.95 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 1353 | 0 | 0 | 1571 | 772 | 554 | 0 | 779 | 0 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 1353 | 0 | 0 | 1571 | 772 | 554 | 0 | 749 | 0 | 0 | 0 |
| Heavy Vehicles (%) | 3% | 2% | 2% | 2% | 2% | 3% | 2% | 3% | 2% | 3% | 3% | 3% |
| Turn Type | | NA | | | NA | Free | Prot | | Prot | | | |
| Protected Phases | | 6 | | | 2 | | 4 | | 4 | | | |
| Permitted Phases | | | | | | Free | | | | | | |
| Actuated Green, G (s) | | 41.8 | | | 41.8 | 80.0 | 27.7 | | 27.7 | | | |
| Effective Green, g (s) | | 43.8 | | | 43.8 | 80.0 | 29.7 | | 29.7 | | | |
| Actuated g/C Ratio | | 0.55 | | | 0.55 | 1.00 | 0.37 | | 0.37 | | | |
| Clearance Time (s) | | 6.5 | | | 6.5 | | 4.0 | | 4.0 | | | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | 3.0 | | 3.0 | | | |
| Lane Grp Cap (vph) | | 2784 | | | 2784 | 1568 | 1852 | | 1034 | | | |
| v/s Ratio Prot | | 0.27 | | | 0.31 | | 0.11 | | 0.27 | | | |
| v/s Ratio Perm | | | | | | 0.49 | | | | | | |
| v/c Ratio | | 0.49 | | | 0.56 | 0.49 | 0.30 | | 0.72 | | | |
| Uniform Delay, d1 | | 11.2 | | | 11.9 | 0.0 | 17.8 | | 21.6 | | | |
| Progression Factor | | 0.91 | | | 0.73 | 1.00 | 1.00 | | 1.00 | | | |
| Incremental Delay, d2 | | 0.6 | | | 0.5 | 0.7 | 0.1 | | 2.5 | | | |
| Delay (s) | | 10.7 | | | 9.1 | 0.7 | 17.9 | | 24.2 | | | |
| Level of Service | | B | | | A | A | B | | C | | | |
| Approach Delay (s) | | 10.7 | | | 6.3 | | | 21.6 | | | 0.0 | |
| Approach LOS | | B | | | A | | | C | | | A | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 11.6 | | | HCM 2000 Level of Service | | | B | | | |
| HCM 2000 Volume to Capacity ratio | | | 0.62 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 80.0 | | | Sum of lost time (s) | | | 6.5 | | | |
| Intersection Capacity Utilization | | | 57.0% | | | ICU Level of Service | | | B | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | |

Queues

4: SW Natura Boulevard/Fairway Drive & Hillsboro Blvd






























| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Group Flow (vph) | 315 | 1728 | 114 | 76 | 1837 | 87 | 435 | 87 | 147 | 37 | 5 | 71 |
| v/c Ratio | 0.84 | 0.54 | 0.11 | 0.60 | 0.61 | 0.09 | 1.56 | 0.31 | 0.41 | 0.40 | 0.07 | 0.35 |
| Control Delay | 82.7 | 14.7 | 1.3 | 90.9 | 21.5 | 0.2 | 309.3 | 65.3 | 12.1 | 68.6 | 76.6 | 4.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 82.7 | 14.7 | 1.3 | 90.9 | 21.5 | 0.2 | 309.3 | 65.3 | 12.1 | 68.6 | 76.6 | 4.7 |
| Queue Length 50th (ft) | 177 | 283 | 3 | 78 | 431 | 0 | ~577 | 84 | 0 | 32 | 5 | 0 |
| Queue Length 95th (ft) | #240 | 360 | 20 | 137 | 476 | 0 | #799 | 143 | 68 | 67 | 21 | 0 |
| Internal Link Dist (ft) | | 660 | | | 631 | | | 513 | | | 403 | |
| Turn Bay Length (ft) | 300 | | 150 | 100 | | 200 | 125 | | | | | 340 |
| Base Capacity (vph) | 384 | 3223 | 1057 | 144 | 3031 | 1002 | 278 | 628 | 631 | 93 | 442 | 490 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.82 | 0.54 | 0.11 | 0.53 | 0.61 | 0.09 | 1.56 | 0.14 | 0.23 | 0.40 | 0.01 | 0.14 |

Intersection Summary

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













HCM Signalized Intersection Capacity Analysis

4: SW Natura Boulevard/Fairway Drive & Hillsboro Blvd

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |   |    |  |  |    |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 290 | 1590 | 105 | 70 | 1690 | 80 | 400 | 80 | 135 | 34 | 5 | 65 |
| Future Volume (vph) | 290 | 1590 | 105 | 70 | 1690 | 80 | 400 | 80 | 135 | 34 | 5 | 65 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| Lane Util. Factor | 0.97 | 0.91 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 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 | 5085 | 1583 | 1770 | 5085 | 1583 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.41 | 1.00 | 1.00 | 0.70 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 5085 | 1583 | 1770 | 5085 | 1583 | 767 | 1863 | 1583 | 1305 | 1863 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 315 | 1728 | 114 | 76 | 1837 | 87 | 435 | 87 | 147 | 37 | 5 | 71 |
| RTOR Reduction (vph) | 0 | 0 | 43 | 0 | 0 | 36 | 0 | 0 | 125 | 0 | 0 | 68 |
| Lane Group Flow (vph) | 315 | 1728 | 71 | 76 | 1837 | 51 | 435 | 87 | 22 | 37 | 5 | 3 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 7 | 4 | | 3 | 8 | |
| Permitted Phases | | | 6 | | | 2 | 4 | | 4 | 8 | | 8 |
| Actuated Green, G (s) | 15.6 | 98.2 | 98.2 | 9.6 | 92.2 | 92.2 | 33.2 | 24.0 | 24.0 | 10.4 | 7.2 | 7.2 |
| Effective Green, g (s) | 17.6 | 100.2 | 100.2 | 11.6 | 94.2 | 94.2 | 33.2 | 24.0 | 24.0 | 10.4 | 7.2 | 7.2 |
| Actuated g/C Ratio | 0.11 | 0.63 | 0.63 | 0.07 | 0.59 | 0.59 | 0.21 | 0.15 | 0.15 | 0.07 | 0.05 | 0.05 |
| Clearance Time (s) | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| Vehicle Extension (s) | 2.0 | 3.0 | 3.0 | 1.5 | 3.0 | 3.0 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 377 | 3184 | 991 | 128 | 2993 | 931 | 284 | 279 | 237 | 94 | 83 | 71 |
| v/s Ratio Prot | c0.09 | 0.34 | | 0.04 | c0.36 | | c0.19 | 0.05 | | 0.01 | 0.00 | |
| v/s Ratio Perm | | | 0.05 | | | 0.03 | c0.13 | | 0.01 | 0.02 | | 0.00 |
| v/c Ratio | 0.84 | 0.54 | 0.07 | 0.59 | 0.61 | 0.06 | 1.53 | 0.31 | 0.09 | 0.39 | 0.06 | 0.04 |
| Uniform Delay, d1 | 69.8 | 16.9 | 11.7 | 71.9 | 21.2 | 14.0 | 61.1 | 60.6 | 58.6 | 71.4 | 73.2 | 73.1 |
| Progression Factor | 0.95 | 0.86 | 1.75 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 12.3 | 0.6 | 0.1 | 4.8 | 1.0 | 0.1 | 256.3 | 0.2 | 0.1 | 1.0 | 0.1 | 0.1 |
| Delay (s) | 78.4 | 15.1 | 20.6 | 76.8 | 22.1 | 14.1 | 317.4 | 60.9 | 58.7 | 72.4 | 73.3 | 73.2 |
| Level of Service | E | B | C | E | C | B | F | E | E | E | E | E |
| Approach Delay (s) | | 24.6 | | | 23.9 | | | 227.2 | | | 73.0 | |
| Approach LOS | | C | | | C | | | F | | | E | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 52.9 | | | | HCM 2000 Level of Service | | | D | | |
| HCM 2000 Volume to Capacity ratio | | | 0.86 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 160.0 | | | | Sum of lost time (s) | | | 21.0 | | |
| Intersection Capacity Utilization | | | 82.3% | | | | ICU Level of Service | | | E | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | |

Queues

1: S Military Trail & SR 869/SW 10th Street

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Group Flow (vph) | 304 | 918 | 130 | 342 | 685 | 467 | 168 | 652 | 576 | 484 | 489 | 342 |
| v/c Ratio | 0.75 | 0.71 | 0.16 | 0.68 | 0.49 | 0.49 | 0.65 | 0.89 | 0.85 | 0.88 | 0.47 | 0.49 |
| Control Delay | 88.6 | 53.7 | 1.7 | 93.1 | 24.2 | 9.1 | 92.6 | 84.6 | 52.0 | 90.8 | 54.0 | 8.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 88.6 | 53.7 | 1.7 | 93.1 | 24.2 | 9.1 | 92.6 | 84.6 | 52.0 | 90.8 | 54.0 | 8.1 |
| Queue Length 50th (ft) | 181 | 488 | 0 | 159 | 306 | 341 | 101 | 397 | 525 | 290 | 249 | 14 |
| Queue Length 95th (ft) | 236 | 624 | 18 | 245 | 308 | 4 | 145 | #483 | 646 | #370 | 309 | 102 |
| Internal Link Dist (ft) | | 620 | | | 1082 | | | 752 | | | 457 | |
| Turn Bay Length (ft) | 550 | | 500 | 550 | | 500 | 300 | | 300 | 650 | | 650 |
| Base Capacity (vph) | 448 | 1302 | 834 | 657 | 1400 | 957 | 276 | 749 | 747 | 574 | 1055 | 700 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.68 | 0.71 | 0.16 | 0.52 | 0.49 | 0.49 | 0.61 | 0.87 | 0.77 | 0.84 | 0.46 | 0.49 |

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

1: S Military Trail & SR 869/SW 10th Street

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
|-----------------------------------|------|-------|-------|------|------|-------|------|------|-------|-------|------|---------------------------|------|
| Lane Configurations | | | | | | | | | | | | | |
| Traffic Volume (vph) | 280 | 845 | 120 | 315 | 630 | 430 | 155 | 600 | 530 | 445 | 450 | 315 | |
| Future Volume (vph) | 280 | 845 | 120 | 315 | 630 | 430 | 155 | 600 | 530 | 445 | 450 | 315 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Total Lost time (s) | 5.5 | 4.0 | 5.9 | 5.5 | 4.0 | 5.9 | 5.9 | 5.9 | 5.5 | 5.9 | 5.9 | 5.9 | |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 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 | 3539 | 1583 | 3433 | 3539 | 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 | 3539 | 1583 | 3433 | 3539 | 1583 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | |
| Adj. Flow (vph) | 304 | 918 | 130 | 342 | 685 | 467 | 168 | 652 | 576 | 484 | 489 | 342 | |
| RTOR Reduction (vph) | 0 | 0 | 72 | 0 | 0 | 33 | 0 | 0 | 74 | 0 | 0 | 230 | |
| Lane Group Flow (vph) | 304 | 918 | 58 | 342 | 685 | 434 | 168 | 652 | 502 | 484 | 489 | 112 | |
| Turn Type | Prot | NA | pm+ov | Prot | NA | pm+ov | Prot | NA | pm+ov | Prot | NA | Perm | |
| Protected Phases | 1 | 6 | 7 | 5 | 2 | 3 | 7 | 4 | 5 | 3 | 8 | | |
| Permitted Phases | | | 6 | | | 2 | | | 4 | | | 8 | |
| Actuated Green, G (s) | 19.3 | 64.2 | 75.9 | 24.3 | 69.2 | 96.2 | 11.7 | 35.2 | 59.5 | 27.0 | 50.5 | 50.5 | |
| Effective Green, g (s) | 21.3 | 66.2 | 79.9 | 26.3 | 71.2 | 100.2 | 13.7 | 37.2 | 63.5 | 29.0 | 52.5 | 52.5 | |
| Actuated g/C Ratio | 0.12 | 0.37 | 0.44 | 0.15 | 0.40 | 0.56 | 0.08 | 0.21 | 0.35 | 0.16 | 0.29 | 0.29 | |
| Clearance Time (s) | 7.5 | 6.0 | 7.9 | 7.5 | 6.0 | 7.9 | 7.9 | 7.9 | 7.5 | 7.9 | 7.9 | 7.9 | |
| Vehicle Extension (s) | 2.0 | 3.0 | 2.0 | 2.0 | 3.0 | 2.0 | 2.0 | 3.0 | 2.0 | 2.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 406 | 1301 | 702 | 501 | 1399 | 881 | 261 | 731 | 558 | 553 | 1032 | 461 | |
| v/s Ratio Prot | 0.09 | c0.26 | 0.01 | 0.10 | 0.19 | c0.08 | 0.05 | 0.18 | c0.13 | c0.14 | 0.14 | | |
| v/s Ratio Perm | | | 0.03 | | | 0.19 | | | 0.19 | | | 0.07 | |
| v/c Ratio | 0.75 | 0.71 | 0.08 | 0.68 | 0.49 | 0.49 | 0.64 | 0.89 | 0.90 | 0.88 | 0.47 | 0.24 | |
| Uniform Delay, d1 | 76.8 | 48.6 | 28.9 | 72.9 | 40.8 | 24.4 | 80.8 | 69.4 | 55.2 | 73.7 | 52.4 | 48.6 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.20 | 0.55 | 0.40 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 6.5 | 3.2 | 0.0 | 2.6 | 1.1 | 0.1 | 4.0 | 13.2 | 17.2 | 14.0 | 0.3 | 0.3 | |
| Delay (s) | 83.3 | 51.8 | 28.9 | 90.2 | 23.7 | 9.8 | 84.8 | 82.6 | 72.5 | 87.7 | 52.7 | 48.9 | |
| Level of Service | F | D | C | F | C | A | F | F | E | F | D | D | |
| Approach Delay (s) | | 56.7 | | | 34.6 | | | 78.7 | | | 64.6 | | |
| Approach LOS | | E | | | C | | | E | | | E | | |
| Intersection Summary | | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 58.1 | | | | | | | | | HCM 2000 Level of Service | E |
| HCM 2000 Volume to Capacity ratio | | | 0.81 | | | | | | | | | | |
| Actuated Cycle Length (s) | | | 180.0 | | | | | | | | | Sum of lost time (s) | 21.3 |
| Intersection Capacity Utilization | | | 81.7% | | | | | | | | | ICU Level of Service | D |
| Analysis Period (min) | | | 15 | | | | | | | | | | |

c Critical Lane Group

Queues

2: Newport Center Dr/SW 12th Avenue & SR 869/SW 10th Street

























| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | NBR | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 321 | 2071 | 424 | 1538 | 402 | 35 | 36 | 109 | 54 | 92 |
| v/c Ratio | 0.47 | 0.57 | 0.77 | 0.56 | 0.40 | 0.25 | 0.25 | 0.22 | 0.53 | 0.14 |
| Control Delay | 60.7 | 23.0 | 85.5 | 18.5 | 2.5 | 82.2 | 82.2 | 8.2 | 99.6 | 7.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 60.7 | 23.0 | 85.5 | 18.5 | 2.5 | 82.2 | 82.2 | 8.2 | 99.6 | 7.9 |
| Queue Length 50th (ft) | 148 | 358 | 246 | 336 | 31 | 41 | 43 | 0 | 63 | 0 |
| Queue Length 95th (ft) | m207 | 455 | 312 | 279 | 11 | 86 | 87 | 50 | 113 | 26 |
| Internal Link Dist (ft) | | 818 | | 925 | | | 616 | | 185 | |
| Turn Bay Length (ft) | 700 | | 750 | | 750 | | | 150 | | |
| Base Capacity (vph) | 679 | 3603 | 705 | 2759 | 1011 | 158 | 161 | 534 | 150 | 709 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.47 | 0.57 | 0.60 | 0.56 | 0.40 | 0.22 | 0.22 | 0.20 | 0.36 | 0.13 |

Intersection Summary

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

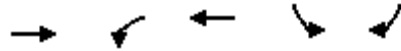
HCM Signalized Intersection Capacity Analysis

2: Newport Center Dr/SW 12th Avenue & SR 869/SW 10th Street

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  |  |  |  |  | |  |  |
| Traffic Volume (vph) | 295 | 1410 | 495 | 390 | 1415 | 370 | 55 | 10 | 100 | 40 | 10 | 85 |
| Future Volume (vph) | 295 | 1410 | 495 | 390 | 1415 | 370 | 55 | 10 | 100 | 40 | 10 | 85 |
| 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 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 |
| Lane Util. Factor | 0.97 | 0.86 | | 0.97 | 0.91 | 1.00 | 0.95 | 0.95 | 1.00 | | 1.00 | 0.88 |
| Frt | 1.00 | 0.96 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 0.97 | 1.00 | | 0.96 | 1.00 |
| Satd. Flow (prot) | 3367 | 6158 | | 3433 | 5085 | 1524 | 1681 | 1710 | 1583 | | 1593 | 2030 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 0.97 | 1.00 | | 0.96 | 1.00 |
| Satd. Flow (perm) | 3367 | 6158 | | 3433 | 5085 | 1524 | 1681 | 1710 | 1583 | | 1593 | 2030 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 321 | 1533 | 538 | 424 | 1538 | 402 | 60 | 11 | 109 | 43 | 11 | 92 |
| RTOR Reduction (vph) | 0 | 29 | 0 | 0 | 0 | 185 | 0 | 0 | 80 | 0 | 0 | 66 |
| Lane Group Flow (vph) | 321 | 2042 | 0 | 424 | 1538 | 217 | 35 | 36 | 29 | 0 | 54 | 26 |
| Heavy Vehicles (%) | 4% | 2% | 2% | 2% | 2% | 6% | 2% | 2% | 2% | 18% | 2% | 40% |
| Turn Type | Prot | NA | | Prot | NA | Prot | Split | NA | pt+ov | Split | NA | pt+ov |
| Protected Phases | 1 | 6 | | 5 | 2 | 2 | 3 | 3 | 3 5 | 4 | 4 | 4 1 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 34.3 | 102.5 | | 27.0 | 95.2 | 95.2 | 15.0 | 15.0 | 48.0 | | 11.5 | 51.8 |
| Effective Green, g (s) | 36.3 | 104.5 | | 29.0 | 97.2 | 97.2 | 15.0 | 15.0 | 48.0 | | 11.5 | 51.8 |
| Actuated g/C Ratio | 0.20 | 0.58 | | 0.16 | 0.54 | 0.54 | 0.08 | 0.08 | 0.27 | | 0.06 | 0.29 |
| Clearance Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 |
| Vehicle Extension (s) | 1.5 | 3.0 | | 2.5 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 679 | 3575 | | 553 | 2745 | 822 | 140 | 142 | 422 | | 101 | 584 |
| v/s Ratio Prot | 0.10 | c0.33 | | c0.12 | 0.30 | 0.14 | 0.02 | c0.02 | 0.02 | | c0.03 | 0.01 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.47 | 0.57 | | 0.77 | 0.56 | 0.26 | 0.25 | 0.25 | 0.07 | | 0.53 | 0.05 |
| Uniform Delay, d1 | 63.4 | 23.7 | | 72.3 | 27.3 | 22.2 | 77.2 | 77.3 | 49.3 | | 81.7 | 46.3 |
| Progression Factor | 0.93 | 0.95 | | 1.08 | 0.64 | 0.81 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.1 | 0.5 | | 5.0 | 0.7 | 0.6 | 0.9 | 0.9 | 0.1 | | 5.4 | 0.0 |
| Delay (s) | 58.8 | 22.9 | | 82.9 | 18.2 | 18.6 | 78.2 | 78.2 | 49.4 | | 87.0 | 46.3 |
| Level of Service | E | C | | F | B | B | E | E | D | | F | D |
| Approach Delay (s) | | 27.7 | | | 29.8 | | | 60.7 | | | 61.3 | |
| Approach LOS | | C | | | C | | | E | | | E | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 30.9 | | | | HCM 2000 Level of Service | | | | C | |
| HCM 2000 Volume to Capacity ratio | | | 0.58 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 180.0 | | | | Sum of lost time (s) | | | 22.0 | | |
| Intersection Capacity Utilization | | | 64.0% | | | | ICU Level of Service | | | | C | |
| Analysis Period (min) | | | 15 | | | | | | | | | |
| c | Critical Lane Group | | | | | | | | | | | |

Queues

3: SR 869/SW 10th Street & I-95 SB Off-Ramp




















| Lane Group | EBT | WBL | WBT | SBL | SBR |
|-------------------------|------|------|------|------|------|
| Lane Group Flow (vph) | 1672 | 626 | 1647 | 316 | 695 |
| v/c Ratio | 0.77 | 0.60 | 0.52 | 0.28 | 0.75 |
| Control Delay | 41.5 | 67.4 | 19.9 | 45.2 | 59.8 |
| Queue Delay | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| Total Delay | 41.5 | 67.4 | 20.1 | 45.2 | 59.8 |
| Queue Length 50th (ft) | 375 | 356 | 222 | 142 | 417 |
| Queue Length 95th (ft) | 441 | 428 | 609 | 186 | 506 |
| Internal Link Dist (ft) | 925 | | 307 | | |
| Turn Bay Length (ft) | | 500 | | 500 | 500 |
| Base Capacity (vph) | 2174 | 1125 | 3149 | 1136 | 922 |
| Starvation Cap Reductn | 0 | 0 | 576 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.77 | 0.56 | 0.64 | 0.28 | 0.75 |

Intersection Summary






HCM Signalized Intersection Capacity Analysis

3: SR 869/SW 10th Street & I-95 SB Off-Ramp

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | |  |  | | | | |  | |  |
| Traffic Volume (vph) | 0 | 1185 | 365 | 595 | 1515 | 0 | 0 | 0 | 0 | 300 | 0 | 660 |
| Future Volume (vph) | 0 | 1185 | 365 | 595 | 1515 | 0 | 0 | 0 | 0 | 300 | 0 | 660 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 4.0 | | 4.0 | 4.5 | | | | | 4.4 | | 4.4 |
| Lane Util. Factor | | 0.81 | | 0.97 | 0.91 | | | | | 0.97 | | 0.88 |
| Frt | | 0.97 | | 1.00 | 1.00 | | | | | 1.00 | | 0.85 |
| Flt Protected | | 1.00 | | 0.95 | 1.00 | | | | | 0.95 | | 1.00 |
| Satd. Flow (prot) | | 7284 | | 3433 | 5085 | | | | | 3433 | | 2787 |
| Flt Permitted | | 1.00 | | 0.95 | 1.00 | | | | | 0.95 | | 1.00 |
| Satd. Flow (perm) | | 7284 | | 3433 | 5085 | | | | | 3433 | | 2787 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.95 | 0.95 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 0 | 1288 | 384 | 626 | 1647 | 0 | 0 | 0 | 0 | 316 | 0 | 695 |
| RTOR Reduction (vph) | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 1643 | 0 | 626 | 1647 | 0 | 0 | 0 | 0 | 316 | 0 | 695 |
| Turn Type | | NA | | Prot | NA | | | | | Prot | | Prot |
| Protected Phases | | 6 | | 5 4 | 2 4 | | | | | 3 | | 3 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | | 51.0 | | 53.0 | 109.5 | | | | | 57.6 | | 57.6 |
| Effective Green, g (s) | | 53.0 | | 50.6 | 107.1 | | | | | 59.6 | | 59.6 |
| Actuated g/C Ratio | | 0.29 | | 0.28 | 0.59 | | | | | 0.33 | | 0.33 |
| Clearance Time (s) | | 6.0 | | | | | | | | 6.4 | | 6.4 |
| Vehicle Extension (s) | | 3.0 | | | | | | | | 2.0 | | 2.0 |
| Lane Grp Cap (vph) | | 2144 | | 965 | 3025 | | | | | 1136 | | 922 |
| v/s Ratio Prot | | c0.23 | | c0.18 | 0.32 | | | | | 0.09 | | c0.25 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | | 0.77 | | 0.65 | 0.54 | | | | | 0.28 | | 0.75 |
| Uniform Delay, d1 | | 57.9 | | 56.9 | 21.8 | | | | | 44.4 | | 53.7 |
| Progression Factor | | 0.69 | | 1.22 | 1.00 | | | | | 1.00 | | 1.00 |
| Incremental Delay, d2 | | 2.3 | | 1.4 | 0.2 | | | | | 0.0 | | 3.1 |
| Delay (s) | | 42.4 | | 70.7 | 21.9 | | | | | 44.4 | | 56.8 |
| Level of Service | | D | | E | C | | | | | D | | E |
| Approach Delay (s) | | 42.4 | | | 35.4 | | | 0.0 | | | 52.9 | |
| Approach LOS | | D | | | D | | | A | | | D | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 41.3 | | | HCM 2000 Level of Service | | | | D | | |
| HCM 2000 Volume to Capacity ratio | | | 0.72 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 180.0 | | | Sum of lost time (s) | | | | 16.8 | | |
| Intersection Capacity Utilization | | | 59.8% | | | ICU Level of Service | | | | B | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | |







Queues

4: I-95 NB On/Off-Ramp & SR 869/SW 10th Street

| |  |  |  |  |  |
|-----------------------------|---|---|---|---|---|
| Lane Group | EBT | EBR | WBT | NBL | NBR |
| Lane Group Flow (vph) | 1168 | 432 | 1967 | 600 | 442 |
| v/c Ratio | 0.35 | 0.16 | 0.35 | 0.56 | 0.57 |
| Control Delay | 1.2 | 0.1 | 4.5 | 65.5 | 66.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 1.2 | 0.1 | 4.5 | 65.5 | 66.7 |
| Queue Length 50th (ft) | 11 | 0 | 82 | 227 | 207 |
| Queue Length 95th (ft) | 12 | 0 | 58 | 272 | 260 |
| Internal Link Dist (ft) | 248 | | 630 | 1225 | |
| Turn Bay Length (ft) | | 700 | | 410 | 430 |
| Base Capacity (vph) | 3305 | 2787 | 5553 | 1070 | 774 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.35 | 0.16 | 0.35 | 0.56 | 0.57 |
| Intersection Summary | | | | | |

HCM Signalized Intersection Capacity Analysis

4: I-95 NB On/Off-Ramp & SR 869/SW 10th Street

| |  |  |  |  |  |  |
|------------------------|---|---|---|---|---|---|
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑↑↑ | ↑↑ | | ↑↑↑↑ | ↑↑↑ | ↑↑↑ |
| Traffic Volume (vph) | 1075 | 410 | 0 | 1810 | 570 | 420 |
| Future Volume (vph) | 1075 | 410 | 0 | 1810 | 570 | 420 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 2.0 | | 4.5 | 4.4 | 4.4 |
| Lane Util. Factor | 0.91 | 0.88 | | 0.81 | 0.94 | 0.76 |
| Frt | 1.00 | 0.85 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 5085 | 2787 | | 7544 | 4990 | 3610 |
| Flt Permitted | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 5085 | 2787 | | 7544 | 4990 | 3610 |
| Peak-hour factor, PHF | 0.92 | 0.95 | 0.92 | 0.92 | 0.95 | 0.95 |
| Adj. Flow (vph) | 1168 | 432 | 0 | 1967 | 600 | 442 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 1168 | 432 | 0 | 1967 | 600 | 442 |
| Turn Type | NA | Free | | NA | Prot | Prot |
| Protected Phases | 6 3 | | | 2 3 | 4 | 4 |
| Permitted Phases | | Free | | | | |
| Actuated Green, G (s) | 114.6 | 180.0 | | 130.6 | 36.6 | 36.6 |
| Effective Green, g (s) | 116.6 | 180.0 | | 132.6 | 38.6 | 38.6 |
| Actuated g/C Ratio | 0.65 | 1.00 | | 0.74 | 0.21 | 0.21 |
| Clearance Time (s) | | | | | 6.4 | 6.4 |
| Vehicle Extension (s) | | | | | 3.5 | 3.5 |
| Lane Grp Cap (vph) | 3293 | 2787 | | 5557 | 1070 | 774 |
| v/s Ratio Prot | c0.23 | | | c0.26 | 0.12 | c0.12 |
| v/s Ratio Perm | | 0.16 | | | | |
| v/c Ratio | 0.35 | 0.16 | | 0.35 | 0.56 | 0.57 |
| Uniform Delay, d1 | 14.5 | 0.0 | | 8.4 | 63.1 | 63.3 |
| Progression Factor | 0.07 | 1.00 | | 0.51 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.0 | 0.1 | | 0.0 | 0.7 | 1.1 |
| Delay (s) | 1.1 | 0.1 | | 4.3 | 63.9 | 64.4 |
| Level of Service | A | A | | A | E | E |
| Approach Delay (s) | 0.8 | | | 4.3 | 64.1 | |
| Approach LOS | A | | | A | E | |













Intersection Summary

| | | | |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay | 16.6 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.43 | | |
| Actuated Cycle Length (s) | 180.0 | Sum of lost time (s) | 18.8 |
| Intersection Capacity Utilization | 51.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

Queues

5: Research Park Boulevard/SW Natura Boulevard & SR 869/SW 10th Street

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Group Flow (vph) | 207 | 1174 | 245 | 114 | 1424 | 92 | 234 | 136 | 141 | 245 | 163 | 310 |
| v/c Ratio | 0.65 | 0.40 | 0.24 | 0.53 | 0.51 | 0.10 | 0.78 | 0.32 | 0.45 | 0.68 | 0.78 | 0.77 |
| Control Delay | 89.0 | 20.0 | 4.8 | 90.8 | 27.3 | 4.7 | 71.7 | 73.1 | 13.6 | 64.4 | 100.6 | 28.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 89.0 | 20.0 | 4.8 | 90.8 | 27.3 | 4.7 | 71.7 | 73.1 | 13.6 | 64.4 | 100.6 | 28.1 |
| Queue Length 50th (ft) | 131 | 162 | 36 | 68 | 384 | 1 | 230 | 78 | 0 | 243 | 191 | 61 |
| Queue Length 95th (ft) | 161 | 439 | 112 | 106 | 497 | 37 | 300 | 111 | 67 | 314 | 267 | 176 |
| Internal Link Dist (ft) | | 630 | | | 1233 | | | 1112 | | | 1327 | |
| Turn Bay Length (ft) | 300 | | 300 | 200 | | 200 | 260 | | 260 | 170 | | 170 |
| Base Capacity (vph) | 392 | 2958 | 1023 | 240 | 2806 | 914 | 325 | 812 | 471 | 377 | 406 | 544 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.53 | 0.40 | 0.24 | 0.47 | 0.51 | 0.10 | 0.72 | 0.17 | 0.30 | 0.65 | 0.40 | 0.57 |
| Intersection Summary | | | | | | | | | | | | |

HCM Signalized Intersection Capacity Analysis

5: Research Park Boulevard/SW Natura Boulevard & SR 869/SW 10th Street

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|-------|-------|-------|------|-------|------|-------|------|------|-------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 190 | 1080 | 225 | 105 | 1310 | 85 | 215 | 125 | 130 | 225 | 150 | 285 |
| Future Volume (vph) | 190 | 1080 | 225 | 105 | 1310 | 85 | 215 | 125 | 130 | 225 | 150 | 285 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 |
| Lane Util. Factor | 0.97 | 0.91 | 1.00 | 0.97 | 0.91 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 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 | 5085 | 1583 | 3433 | 5085 | 1583 | 1770 | 3539 | 1583 | 1770 | 1863 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.31 | 1.00 | 1.00 | 0.67 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 5085 | 1583 | 3433 | 5085 | 1583 | 576 | 3539 | 1583 | 1240 | 1863 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 207 | 1174 | 245 | 114 | 1424 | 92 | 234 | 136 | 141 | 245 | 163 | 310 |
| RTOR Reduction (vph) | 0 | 0 | 102 | 0 | 0 | 40 | 0 | 0 | 124 | 0 | 0 | 226 |
| Lane Group Flow (vph) | 207 | 1174 | 143 | 114 | 1424 | 52 | 234 | 136 | 17 | 245 | 163 | 84 |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 7 | 4 | | 3 | 8 | |
| Permitted Phases | | | 6 | | | 2 | 4 | | 4 | 8 | | 8 |
| Actuated Green, G (s) | 14.7 | 102.7 | 102.7 | 9.3 | 97.3 | 97.3 | 45.0 | 21.6 | 21.6 | 42.6 | 20.4 | 20.4 |
| Effective Green, g (s) | 16.7 | 104.7 | 104.7 | 11.3 | 99.3 | 99.3 | 45.0 | 21.6 | 21.6 | 42.6 | 20.4 | 20.4 |
| Actuated g/C Ratio | 0.09 | 0.58 | 0.58 | 0.06 | 0.55 | 0.55 | 0.25 | 0.12 | 0.12 | 0.24 | 0.11 | 0.11 |
| Clearance Time (s) | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 |
| Vehicle Extension (s) | 1.5 | 3.0 | 3.0 | 1.5 | 3.0 | 3.0 | 1.5 | 2.0 | 2.0 | 1.5 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 318 | 2957 | 920 | 215 | 2805 | 873 | 299 | 424 | 189 | 358 | 211 | 179 |
| v/s Ratio Prot | c0.06 | 0.23 | | 0.03 | c0.28 | | c0.10 | 0.04 | | 0.08 | 0.09 | |
| v/s Ratio Perm | | | 0.09 | | | 0.03 | c0.09 | | 0.01 | 0.08 | | 0.05 |
| v/c Ratio | 0.65 | 0.40 | 0.15 | 0.53 | 0.51 | 0.06 | 0.78 | 0.32 | 0.09 | 0.68 | 0.77 | 0.47 |
| Uniform Delay, d1 | 78.8 | 20.5 | 17.3 | 81.8 | 25.1 | 18.7 | 58.8 | 72.5 | 70.5 | 60.9 | 77.5 | 74.7 |
| Progression Factor | 1.01 | 0.91 | 1.91 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 3.4 | 0.4 | 0.3 | 1.3 | 0.1 | 0.0 | 11.6 | 0.2 | 0.1 | 4.3 | 14.7 | 0.7 |
| Delay (s) | 83.4 | 18.9 | 33.5 | 83.0 | 25.3 | 18.7 | 70.4 | 72.6 | 70.5 | 65.1 | 92.2 | 75.4 |
| Level of Service | F | B | C | F | C | B | E | E | E | E | F | E |
| Approach Delay (s) | | 29.3 | | | 28.9 | | | 71.0 | | | 75.7 | |
| Approach LOS | | C | | | C | | | E | | | E | |

Intersection Summary

| | | | |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay | 41.4 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.60 | | |
| Actuated Cycle Length (s) | 180.0 | Sum of lost time (s) | 20.2 |
| Intersection Capacity Utilization | 68.0% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

Queues

1: NW 5th Terr & Sample Road



| Lane Group | EBT | WBL | WBT | NBL | NBR |
|-------------------------|------|------|------|------|------|
| Lane Group Flow (vph) | 2288 | 152 | 1810 | 147 | 190 |
| v/c Ratio | 0.54 | 0.64 | 0.47 | 0.68 | 0.53 |
| Control Delay | 17.0 | 62.0 | 1.6 | 65.1 | 11.8 |
| Queue Delay | 0.0 | 1.6 | 0.1 | 0.0 | 0.0 |
| Total Delay | 17.0 | 63.6 | 1.7 | 65.1 | 11.8 |
| Queue Length 50th (ft) | 254 | 84 | 26 | 111 | 0 |
| Queue Length 95th (ft) | 323 | #154 | 27 | 170 | 64 |
| Internal Link Dist (ft) | 575 | | 175 | 531 | |
| Turn Bay Length (ft) | | | | | |
| Base Capacity (vph) | 4265 | 236 | 3824 | 545 | 619 |
| Starvation Cap Reductn | 0 | 19 | 458 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.54 | 0.70 | 0.54 | 0.27 | 0.31 |

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

1: NW 5th Terr & Sample Road

| | → | ↘ | ↙ | ← | ↖ | ↗ |
|------------------------|-------|------|-------|-------|-------|------|
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑↑↑↑ | | ↘ | ↑↑↑ | ↘ | ↗ |
| Traffic Volume (vph) | 2000 | 105 | 140 | 1665 | 135 | 175 |
| Future Volume (vph) | 2000 | 105 | 140 | 1665 | 135 | 175 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 6.0 | | 6.0 | 6.0 | 9.0 | 9.0 |
| Lane Util. Factor | 0.81 | | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | 0.99 | | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 7488 | | 1770 | 5085 | 1770 | 1583 |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 7488 | | 1770 | 5085 | 1770 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 2174 | 114 | 152 | 1810 | 147 | 190 |
| RTOR Reduction (vph) | 5 | 0 | 0 | 0 | 0 | 167 |
| Lane Group Flow (vph) | 2283 | 0 | 152 | 1810 | 147 | 23 |
| Turn Type | NA | | Prot | NA | Prot | Perm |
| Protected Phases | 2 3 | | 1 | 1 2 3 | 4 | |
| Permitted Phases | | | | | 4 | 4 |
| Actuated Green, G (s) | 66.2 | | 14.0 | 88.2 | 14.8 | 14.8 |
| Effective Green, g (s) | 68.2 | | 16.0 | 90.2 | 14.8 | 14.8 |
| Actuated g/C Ratio | 0.57 | | 0.13 | 0.75 | 0.12 | 0.12 |
| Clearance Time (s) | | | 8.0 | | 9.0 | 9.0 |
| Vehicle Extension (s) | | | 1.5 | | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 4255 | | 236 | 3822 | 218 | 195 |
| v/s Ratio Prot | c0.30 | | c0.09 | 0.36 | c0.08 | |
| v/s Ratio Perm | | | | | | 0.01 |
| v/c Ratio | 0.54 | | 0.64 | 0.47 | 0.67 | 0.12 |
| Uniform Delay, d1 | 16.1 | | 49.3 | 5.7 | 50.3 | 46.8 |
| Progression Factor | 1.00 | | 1.00 | 0.20 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.1 | | 4.1 | 0.0 | 6.3 | 0.1 |
| Delay (s) | 16.2 | | 53.6 | 1.2 | 56.6 | 46.9 |
| Level of Service | B | | D | A | E | D |
| Approach Delay (s) | 16.2 | | | 5.2 | 51.1 | |
| Approach LOS | B | | | A | D | |

Intersection Summary

| | | | |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay | 14.0 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.61 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 27.0 |
| Intersection Capacity Utilization | 57.3% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

Queues

2: Sample Road & NW 5th Ave



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 92 | 2272 | 1799 | 82 | 250 | 163 |
| v/c Ratio | 0.70 | 0.47 | 0.45 | 0.08 | 0.59 | 0.49 |
| Control Delay | 63.6 | 2.4 | 9.8 | 1.3 | 55.0 | 13.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 63.6 | 2.4 | 9.8 | 1.3 | 55.0 | 13.2 |
| Queue Length 50th (ft) | 70 | 26 | 179 | 3 | 95 | 5 |
| Queue Length 95th (ft) | #152 | 43 | 242 | m4 | 130 | 64 |
| Internal Link Dist (ft) | | 175 | 1004 | | 271 | |
| Turn Bay Length (ft) | | | | 450 | | |
| Base Capacity (vph) | 132 | 4818 | 4017 | 1023 | 1058 | 595 |
| Starvation Cap Reductn | 0 | 529 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 14 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.70 | 0.53 | 0.45 | 0.08 | 0.24 | 0.27 |

Intersection Summary

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

Queue shown is maximum after two cycles.

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

HCM Signalized Intersection Capacity Analysis

2: Sample Road & NW 5th Ave



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|------------------------|-------|-------|------|------|-------|------|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 85 | 2090 | 1655 | 75 | 230 | 150 |
| Future Volume (vph) | 85 | 2090 | 1655 | 75 | 230 | 150 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 9.0 | 9.0 |
| Lane Util. Factor | 1.00 | 0.86 | 0.86 | 1.00 | 0.97 | 1.00 |
| Frt | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 1770 | 6408 | 6408 | 1583 | 3433 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 1770 | 6408 | 6408 | 1583 | 3433 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 92 | 2272 | 1799 | 82 | 250 | 163 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 31 | 0 | 137 |
| Lane Group Flow (vph) | 92 | 2272 | 1799 | 51 | 250 | 26 |
| Turn Type | Prot | NA | NA | Perm | Prot | Perm |
| Protected Phases | 3 | 1 2 3 | 1 2 | | 4 | |
| Permitted Phases | | | | 1 2 | | 4 |
| Actuated Green, G (s) | 7.0 | 88.2 | 73.2 | 73.2 | 14.8 | 14.8 |
| Effective Green, g (s) | 9.0 | 90.2 | 75.2 | 75.2 | 14.8 | 14.8 |
| Actuated g/C Ratio | 0.08 | 0.75 | 0.63 | 0.63 | 0.12 | 0.12 |
| Clearance Time (s) | 8.0 | | | | 9.0 | 9.0 |
| Vehicle Extension (s) | 1.5 | | | | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 132 | 4816 | 4015 | 992 | 423 | 195 |
| v/s Ratio Prot | c0.05 | c0.35 | 0.28 | | c0.07 | |
| v/s Ratio Perm | | | | 0.03 | | 0.02 |
| v/c Ratio | 0.70 | 0.47 | 0.45 | 0.05 | 0.59 | 0.13 |
| Uniform Delay, d1 | 54.2 | 5.7 | 11.6 | 8.6 | 49.7 | 46.9 |
| Progression Factor | 0.72 | 0.34 | 0.78 | 0.50 | 1.00 | 1.00 |
| Incremental Delay, d2 | 10.6 | 0.0 | 0.0 | 0.0 | 1.5 | 0.1 |
| Delay (s) | 49.5 | 2.0 | 9.1 | 4.3 | 51.2 | 47.0 |
| Level of Service | D | A | A | A | D | D |
| Approach Delay (s) | | 3.8 | 8.9 | | 49.6 | |
| Approach LOS | | A | A | | D | |

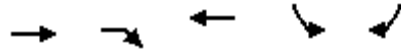
Intersection Summary

| | | | |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay | 9.9 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.56 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 27.0 |
| Intersection Capacity Utilization | 52.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

Queues

3: Sample Road & I-95 SB RAMP














| Lane Group | EBT | EBR | WBT | SBL2 | SBR |
|-------------------------|------|------|------|------|------|
| Lane Group Flow (vph) | 1554 | 937 | 1391 | 442 | 474 |
| v/c Ratio | 0.42 | 0.59 | 0.48 | 0.52 | 0.69 |
| Control Delay | 5.4 | 7.6 | 6.9 | 21.9 | 26.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 5.4 | 7.6 | 6.9 | 21.9 | 26.4 |
| Queue Length 50th (ft) | 74 | 232 | 107 | 70 | 86 |
| Queue Length 95th (ft) | 131 | 356 | 146 | 108 | 135 |
| Internal Link Dist (ft) | 1004 | | 259 | | |
| Turn Bay Length (ft) | | 250 | | | |
| Base Capacity (vph) | 3658 | 1583 | 2903 | 886 | 719 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.42 | 0.59 | 0.48 | 0.50 | 0.66 |

Intersection Summary

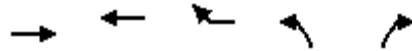
HCM Signalized Intersection Capacity Analysis

3: Sample Road & I-95 SB RAMP

| |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
| Lane Configurations | | ↑↑↑ | ↗ | | ↑↑↑ | | ↘↘ | | ↘↘ | | |
| Traffic Volume (vph) | 0 | 1430 | 890 | 0 | 1280 | 0 | 420 | 0 | 450 | 0 | 0 |
| Future Volume (vph) | 0 | 1430 | 890 | 0 | 1280 | 0 | 420 | 0 | 450 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.5 | 2.0 | | 5.5 | | 5.5 | | 5.5 | | |
| Lane Util. Factor | | 0.86 | 1.00 | | 0.91 | | 0.97 | | 0.88 | | |
| Frt | | 1.00 | 0.85 | | 1.00 | | 1.00 | | 0.85 | | |
| Flt Protected | | 1.00 | 1.00 | | 1.00 | | 0.95 | | 1.00 | | |
| Satd. Flow (prot) | | 6408 | 1583 | | 5085 | | 3433 | | 2787 | | |
| Flt Permitted | | 1.00 | 1.00 | | 1.00 | | 0.95 | | 1.00 | | |
| Satd. Flow (perm) | | 6408 | 1583 | | 5085 | | 3433 | | 2787 | | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.95 | 0.92 | 0.92 | 0.92 | 0.95 | 0.92 | 0.95 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 1554 | 937 | 0 | 1391 | 0 | 442 | 0 | 474 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 1554 | 937 | 0 | 1391 | 0 | 442 | 0 | 474 | 0 | 0 |
| Turn Type | | NA | Free | | NA | | Prot | | Prot | | |
| Protected Phases | | 6 | | | 2 | | 3 | | 3 | | |
| Permitted Phases | | | Free | | | | | | | | |
| Actuated Green, G (s) | | 32.3 | 60.0 | | 32.3 | | 12.7 | | 12.7 | | |
| Effective Green, g (s) | | 34.3 | 60.0 | | 34.3 | | 14.7 | | 14.7 | | |
| Actuated g/C Ratio | | 0.57 | 1.00 | | 0.57 | | 0.24 | | 0.24 | | |
| Clearance Time (s) | | 7.5 | | | 7.5 | | 7.5 | | 7.5 | | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | 2.5 | | 2.5 | | |
| Lane Grp Cap (vph) | | 3663 | 1583 | | 2906 | | 841 | | 682 | | |
| v/s Ratio Prot | | 0.24 | | | 0.27 | | 0.13 | | 0.17 | | |
| v/s Ratio Perm | | | c0.59 | | | | | | | | |
| v/c Ratio | | 0.42 | 0.59 | | 0.48 | | 0.53 | | 0.70 | | |
| Uniform Delay, d1 | | 7.3 | 0.0 | | 7.6 | | 19.6 | | 20.6 | | |
| Progression Factor | | 0.68 | 1.00 | | 0.83 | | 1.00 | | 1.00 | | |
| Incremental Delay, d2 | | 0.3 | 1.5 | | 0.5 | | 0.5 | | 2.8 | | |
| Delay (s) | | 5.3 | 1.5 | | 6.7 | | 20.1 | | 23.5 | | |
| Level of Service | | A | A | | A | | C | | C | | |
| Approach Delay (s) | | 3.8 | | | 6.7 | | | 21.8 | | 0.0 | |
| Approach LOS | | A | | | A | | | C | | A | |
| Intersection Summary | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 8.1 | | | | HCM 2000 Level of Service | | A | | |
| HCM 2000 Volume to Capacity ratio | | | 0.72 | | | | | | | | |
| Actuated Cycle Length (s) | | | 60.0 | | | | Sum of lost time (s) | | 11.0 | | |
| Intersection Capacity Utilization | | | 57.8% | | | | ICU Level of Service | | B | | |
| Analysis Period (min) | | | 15 | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | |

Queues

4: I-95 NB RAMP & Sample Road














| Lane Group | EBT | WBT | WBR | NBL2 | NBR |
|-------------------------|------|------|------|------|------|
| Lane Group Flow (vph) | 1130 | 1848 | 453 | 484 | 347 |
| v/c Ratio | 0.38 | 0.62 | 0.29 | 0.62 | 0.55 |
| Control Delay | 5.1 | 4.6 | 0.2 | 24.5 | 23.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 5.1 | 4.6 | 0.2 | 24.5 | 23.8 |
| Queue Length 50th (ft) | 82 | 91 | 0 | 79 | 61 |
| Queue Length 95th (ft) | 56 | m143 | m0 | 121 | 101 |
| Internal Link Dist (ft) | 270 | 1155 | | | |
| Turn Bay Length (ft) | | | 250 | | |
| Base Capacity (vph) | 2991 | 2991 | 1583 | 829 | 673 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.38 | 0.62 | 0.29 | 0.58 | 0.52 |

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

4: I-95 NB RAMP & Sample Road

| |  |  |  |  |  |  |  |  |  |  |  | |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|------|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL2 | NBL | NBR | SEL | SER | |
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | ↑ | ↑↑ | | ↑↑ | | | |
| Traffic Volume (vph) | 0 | 1040 | 0 | 0 | 1700 | 430 | 460 | 0 | 330 | 0 | 0 | |
| Future Volume (vph) | 0 | 1040 | 0 | 0 | 1700 | 430 | 460 | 0 | 330 | 0 | 0 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Total Lost time (s) | | 5.5 | | | 5.5 | 2.0 | 5.5 | | 5.5 | | | |
| Lane Util. Factor | | 0.91 | | | 0.91 | 1.00 | 0.97 | | 0.88 | | | |
| Frt | | 1.00 | | | 1.00 | 0.85 | 1.00 | | 0.85 | | | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | | 1.00 | | | |
| Satd. Flow (prot) | | 5085 | | | 5085 | 1583 | 3433 | | 2787 | | | |
| Flt Permitted | | 1.00 | | | 1.00 | 1.00 | 0.95 | | 1.00 | | | |
| Satd. Flow (perm) | | 5085 | | | 5085 | 1583 | 3433 | | 2787 | | | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.95 | 0.95 | 0.92 | 0.95 | 0.92 | 0.92 | |
| Adj. Flow (vph) | 0 | 1130 | 0 | 0 | 1848 | 453 | 484 | 0 | 347 | 0 | 0 | |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Lane Group Flow (vph) | 0 | 1130 | 0 | 0 | 1848 | 453 | 484 | 0 | 347 | 0 | 0 | |
| Turn Type | | NA | | | NA | Free | Prot | | Prot | | | |
| Protected Phases | | 6 | | | 2 | | 4 | | 4 | | | |
| Permitted Phases | | | | | | Free | | | | | | |
| Actuated Green, G (s) | | 33.3 | | | 33.3 | 60.0 | 11.7 | | 11.7 | | | |
| Effective Green, g (s) | | 35.3 | | | 35.3 | 60.0 | 13.7 | | 13.7 | | | |
| Actuated g/C Ratio | | 0.59 | | | 0.59 | 1.00 | 0.23 | | 0.23 | | | |
| Clearance Time (s) | | 7.5 | | | 7.5 | | 7.5 | | 7.5 | | | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | 2.5 | | 2.5 | | | |
| Lane Grp Cap (vph) | | 2991 | | | 2991 | 1583 | 783 | | 636 | | | |
| v/s Ratio Prot | | 0.22 | | | 0.36 | | 0.14 | | 0.12 | | | |
| v/s Ratio Perm | | | | | | 0.29 | | | | | | |
| v/c Ratio | | 0.38 | | | 0.62 | 0.29 | 0.62 | | 0.55 | | | |
| Uniform Delay, d1 | | 6.5 | | | 8.0 | 0.0 | 20.8 | | 20.4 | | | |
| Progression Factor | | 0.71 | | | 0.51 | 1.00 | 1.00 | | 1.00 | | | |
| Incremental Delay, d2 | | 0.3 | | | 0.4 | 0.2 | 1.2 | | 0.8 | | | |
| Delay (s) | | 5.0 | | | 4.5 | 0.2 | 22.0 | | 21.2 | | | |
| Level of Service | | A | | | A | A | C | | C | | | |
| Approach Delay (s) | | 5.0 | | | 3.7 | | | 21.7 | | 0.0 | | |
| Approach LOS | | A | | | A | | | C | | A | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 7.5 | | | | | | | | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | | | 0.62 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 60.0 | | | | | | | | Sum of lost time (s) | 11.0 |
| Intersection Capacity Utilization | | | 53.5% | | | | | | | | ICU Level of Service | A |
| Analysis Period (min) | | | 15 | | | | | | | | | |

c Critical Lane Group

Queues

5: NE 3rd Ave & Sample Road


































| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 386 | 1103 | 49 | 1658 | 212 | 217 | 65 | 92 | 212 | 516 |
| v/c Ratio | 0.91 | 0.48 | 0.43 | 0.87 | 0.63 | 0.43 | 0.12 | 0.28 | 0.44 | 0.98 |
| Control Delay | 71.5 | 18.4 | 66.2 | 40.8 | 40.4 | 39.2 | 0.5 | 29.1 | 40.1 | 66.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 71.5 | 18.4 | 66.2 | 40.8 | 40.4 | 39.2 | 0.5 | 29.1 | 40.1 | 66.1 |
| Queue Length 50th (ft) | 147 | 202 | 37 | 433 | 117 | 138 | 0 | 47 | 136 | 297 |
| Queue Length 95th (ft) | #243 | 260 | 79 | 501 | 183 | 214 | 0 | 86 | 212 | #526 |
| Internal Link Dist (ft) | | 1155 | | 834 | | 912 | | | 742 | |
| Turn Bay Length (ft) | 550 | | 490 | | 250 | | 225 | 200 | | |
| Base Capacity (vph) | 425 | 2284 | 116 | 1899 | 335 | 507 | 543 | 327 | 492 | 531 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.91 | 0.48 | 0.42 | 0.87 | 0.63 | 0.43 | 0.12 | 0.28 | 0.43 | 0.97 |

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

5: NE 3rd Ave & Sample Road

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |   |    | |   |    | |  |  |  |   |   |   |
| Traffic Volume (vph) | 355 | 900 | 115 | 45 | 1460 | 65 | 195 | 200 | 60 | 85 | 195 | 475 |
| Future Volume (vph) | 355 | 900 | 115 | 45 | 1460 | 65 | 195 | 200 | 60 | 85 | 195 | 475 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| Lane Util. Factor | 0.97 | 0.91 | | 1.00 | 0.91 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.98 | | 1.00 | 0.99 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3400 | 4950 | | 1752 | 5004 | | 1752 | 1845 | 1568 | 1752 | 1845 | 1568 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.49 | 1.00 | 1.00 | 0.52 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3400 | 4950 | | 1752 | 5004 | | 913 | 1845 | 1568 | 967 | 1845 | 1568 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 386 | 978 | 125 | 49 | 1587 | 71 | 212 | 217 | 65 | 92 | 212 | 516 |
| RTOR Reduction (vph) | 0 | 13 | 0 | 0 | 4 | 0 | 0 | 0 | 47 | 0 | 0 | 114 |
| Lane Group Flow (vph) | 386 | 1090 | 0 | 49 | 1654 | 0 | 212 | 217 | 18 | 92 | 212 | 402 |
| Heavy Vehicles (%) | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% | 3% |
| Turn Type | Prot | NA | | Prot | NA | | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 7 | 4 | | 3 | 8 | |
| Permitted Phases | | | | | | | 4 | | 4 | 8 | | 8 |
| Actuated Green, G (s) | 13.0 | 51.6 | | 4.8 | 43.4 | | 38.6 | 32.6 | 32.6 | 36.6 | 31.6 | 31.6 |
| Effective Green, g (s) | 15.0 | 53.6 | | 6.8 | 45.4 | | 38.6 | 32.6 | 32.6 | 36.6 | 31.6 | 31.6 |
| Actuated g/C Ratio | 0.12 | 0.45 | | 0.06 | 0.38 | | 0.32 | 0.27 | 0.27 | 0.31 | 0.26 | 0.26 |
| Clearance Time (s) | 7.0 | 7.0 | | 7.0 | 7.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| Vehicle Extension (s) | 1.5 | 3.0 | | 1.5 | 3.0 | | 1.5 | 2.0 | 2.0 | 1.5 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 425 | 2211 | | 99 | 1893 | | 335 | 501 | 425 | 327 | 485 | 412 |
| v/s Ratio Prot | c0.11 | 0.22 | | 0.03 | c0.33 | | c0.03 | 0.12 | | 0.01 | 0.11 | |
| v/s Ratio Perm | | | | | | | 0.17 | | 0.01 | 0.07 | | c0.26 |
| v/c Ratio | 0.91 | 0.49 | | 0.49 | 0.87 | | 0.63 | 0.43 | 0.04 | 0.28 | 0.44 | 0.98 |
| Uniform Delay, d1 | 51.8 | 23.6 | | 54.9 | 34.6 | | 34.8 | 36.1 | 32.2 | 30.7 | 36.8 | 43.8 |
| Progression Factor | 0.89 | 0.77 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 21.1 | 0.7 | | 1.4 | 6.0 | | 2.9 | 0.2 | 0.0 | 0.2 | 0.2 | 37.4 |
| Delay (s) | 67.5 | 18.9 | | 56.4 | 40.6 | | 37.6 | 36.3 | 32.2 | 30.9 | 37.0 | 81.2 |
| Level of Service | E | B | | E | D | | D | D | C | C | D | F |
| Approach Delay (s) | | 31.5 | | | 41.1 | | | 36.3 | | | 64.1 | |
| Approach LOS | | C | | | D | | | D | | | E | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 41.6 | | | | HCM 2000 Level of Service | | | | D | |
| HCM 2000 Volume to Capacity ratio | | | 0.90 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 120.0 | | | | Sum of lost time (s) | | | 22.0 | | |
| Intersection Capacity Utilization | | | 84.0% | | | | ICU Level of Service | | | E | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | |

Queues

1: SW 12th Avenue & Hillsboro Blvd



| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|-------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 43 | 2016 | 250 | 2190 | 54 | 223 | 11 | 332 | 259 | 263 | 337 |
| v/c Ratio | 0.42 | 0.83 | 1.25 | 0.90 | 0.05 | 0.64 | 0.06 | 0.89 | 0.84 | 0.83 | 0.68 |
| Control Delay | 67.2 | 32.0 | 197.2 | 24.3 | 0.2 | 60.0 | 47.6 | 59.8 | 69.1 | 68.1 | 18.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 67.2 | 32.0 | 197.2 | 24.3 | 0.2 | 60.0 | 47.6 | 59.8 | 69.1 | 68.1 | 18.5 |
| Queue Length 50th (ft) | 33 | 484 | ~128 | 445 | 1 | 87 | 8 | 192 | 204 | 207 | 72 |
| Queue Length 95th (ft) | 72 | #676 | #213 | #776 | m0 | 124 | 26 | #324 | 295 | 297 | 146 |
| Internal Link Dist (ft) | | 580 | | 548 | | | 436 | | | 396 | |
| Turn Bay Length (ft) | 450 | | 375 | | 350 | 225 | | 250 | 200 | | |
| Base Capacity (vph) | 103 | 2422 | 200 | 2441 | 1222 | 915 | 496 | 375 | 378 | 386 | 498 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.42 | 0.83 | 1.25 | 0.90 | 0.04 | 0.24 | 0.02 | 0.89 | 0.69 | 0.68 | 0.68 |

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.































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

Queue shown is maximum after two cycles.

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

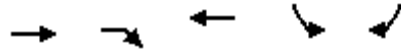
HCM Signalized Intersection Capacity Analysis

1: SW 12th Avenue & Hillsboro Blvd

| |  |  |  |  |  |  |  |  |  |  |  |  | |
|-----------------------------------|---|---|---|--|---|---|--|---|---|---|--|---|------|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations |  |    | |   |    |  |   |  |  |  |   |  | |
| Traffic Volume (vph) | 40 | 1725 | 130 | 230 | 2015 | 50 | 205 | 10 | 305 | 390 | 90 | 310 | |
| Future Volume (vph) | 40 | 1725 | 130 | 230 | 2015 | 50 | 205 | 10 | 305 | 390 | 90 | 310 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Total Lost time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | 4.0 | 6.0 | 6.0 | 6.5 | 6.0 | 6.0 | 6.5 | |
| Lane Util. Factor | 1.00 | 0.91 | | 0.97 | 0.91 | 1.00 | 0.97 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | |
| Frt | 1.00 | 0.99 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.97 | 1.00 | |
| Satd. Flow (prot) | 1770 | 5032 | | 3433 | 5085 | 1583 | 3433 | 1863 | 1583 | 1681 | 1716 | 1583 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.97 | 1.00 | |
| Satd. Flow (perm) | 1770 | 5032 | | 3433 | 5085 | 1583 | 3433 | 1863 | 1583 | 1681 | 1716 | 1583 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | |
| Adj. Flow (vph) | 43 | 1875 | 141 | 250 | 2190 | 54 | 223 | 11 | 332 | 424 | 98 | 337 | |
| RTOR Reduction (vph) | 0 | 5 | 0 | 0 | 0 | 17 | 0 | 0 | 74 | 0 | 0 | 145 | |
| Lane Group Flow (vph) | 43 | 2011 | 0 | 250 | 2190 | 37 | 223 | 11 | 258 | 259 | 263 | 192 | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | |
| Turn Type | Prot | NA | | Prot | NA | pm+ov | Split | NA | pm+ov | Split | NA | pm+ov | |
| Protected Phases | 1 | 6 | | 5 | 2 | 3 | 4 | 4 | 5 | 3 | 3 | 1 | |
| Permitted Phases | | | | | | 2 | | | 4 | | | 3 | |
| Actuated Green, G (s) | 5.0 | 55.6 | | 5.0 | 55.6 | 77.8 | 12.2 | 12.2 | 17.2 | 22.2 | 22.2 | 27.2 | |
| Effective Green, g (s) | 7.0 | 57.6 | | 7.0 | 57.6 | 81.8 | 12.2 | 12.2 | 17.2 | 22.2 | 22.2 | 27.2 | |
| Actuated g/C Ratio | 0.06 | 0.48 | | 0.06 | 0.48 | 0.68 | 0.10 | 0.10 | 0.14 | 0.18 | 0.18 | 0.23 | |
| Clearance Time (s) | 6.5 | 6.5 | | 6.5 | 6.5 | 6.0 | 6.0 | 6.0 | 6.5 | 6.0 | 6.0 | 6.5 | |
| Vehicle Extension (s) | 1.5 | 3.0 | | 2.0 | 3.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.5 | |
| Lane Grp Cap (vph) | 103 | 2415 | | 200 | 2440 | 1079 | 349 | 189 | 226 | 310 | 317 | 358 | |
| v/s Ratio Prot | 0.02 | 0.40 | | c0.07 | c0.43 | 0.01 | 0.06 | 0.01 | c0.05 | c0.15 | 0.15 | 0.02 | |
| v/s Ratio Perm | | | | | | 0.02 | | | 0.12 | | | 0.10 | |
| v/c Ratio | 0.42 | 0.83 | | 1.25 | 0.90 | 0.03 | 0.64 | 0.06 | 1.14 | 0.84 | 0.83 | 0.54 | |
| Uniform Delay, d1 | 54.5 | 27.0 | | 56.5 | 28.5 | 6.2 | 51.8 | 48.7 | 51.4 | 47.1 | 47.1 | 40.8 | |
| Progression Factor | 1.00 | 1.00 | | 1.33 | 0.62 | 0.23 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 1.0 | 3.5 | | 140.2 | 4.5 | 0.0 | 2.8 | 0.0 | 103.8 | 16.7 | 15.5 | 0.8 | |
| Delay (s) | 55.5 | 30.6 | | 215.5 | 22.3 | 1.4 | 54.6 | 48.8 | 155.2 | 63.8 | 62.6 | 41.6 | |
| Level of Service | E | C | | F | C | A | D | D | F | E | E | D | |
| Approach Delay (s) | | 31.1 | | | 41.2 | | | 113.5 | | | 54.7 | | |
| Approach LOS | | C | | | D | | | F | | | D | | |
| Intersection Summary | | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 46.5 | | | | | | | | | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | | | 0.96 | | | | | | | | | | |
| Actuated Cycle Length (s) | | | 120.0 | | | | | | | | | Sum of lost time (s) | 23.0 |
| Intersection Capacity Utilization | | | 82.4% | | | | | | | | | ICU Level of Service | E |
| Analysis Period (min) | | | 15 | | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | | |

Queues

2: Hillsboro Bvd & I-95 SB RAMP














| Lane Group | EBT | EBR | WBT | SBL2 | SBR |
|-------------------------|------|------|------|------|------|
| Lane Group Flow (vph) | 1848 | 758 | 1946 | 563 | 532 |
| v/c Ratio | 0.36 | 0.48 | 0.70 | 0.84 | 0.50 |
| Control Delay | 0.1 | 0.8 | 17.4 | 45.7 | 29.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 0.1 | 0.8 | 17.4 | 45.7 | 29.7 |
| Queue Length 50th (ft) | 0 | 0 | 275 | 388 | 175 |
| Queue Length 95th (ft) | 0 | m0 | 418 | 486 | 209 |
| Internal Link Dist (ft) | 548 | | 319 | | |
| Turn Bay Length (ft) | | 150 | | | |
| Base Capacity (vph) | 5085 | 1583 | 2780 | 789 | 1242 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.36 | 0.48 | 0.70 | 0.71 | 0.43 |

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

2: Hillsboro Bvd & I-95 SB RAMP

| |  |  |  |  |  |  |  |  |  |  |  |
|---------------------------------------|---|---|---|---|---|---|--|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
| Lane Configurations | | ↑↑↑ | ↑ | | ↑↑↑ | | ↑ | | ↑↑ | | |
| Traffic Volume (vph) | 0 | 1700 | 720 | 0 | 1790 | 0 | 535 | 0 | 505 | 0 | 0 |
| Future Volume (vph) | 0 | 1700 | 720 | 0 | 1790 | 0 | 535 | 0 | 505 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 2.0 | 2.0 | | 4.5 | | 4.5 | | 4.5 | | |
| Lane Util. Factor | | 0.91 | 1.00 | | 0.91 | | 1.00 | | 0.88 | | |
| Frt | | 1.00 | 0.85 | | 1.00 | | 1.00 | | 0.85 | | |
| Flt Protected | | 1.00 | 1.00 | | 1.00 | | 0.95 | | 1.00 | | |
| Satd. Flow (prot) | | 5085 | 1583 | | 5085 | | 1770 | | 2787 | | |
| Flt Permitted | | 1.00 | 1.00 | | 1.00 | | 0.95 | | 1.00 | | |
| Satd. Flow (perm) | | 5085 | 1583 | | 5085 | | 1770 | | 2787 | | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.95 | 0.92 | 0.92 | 0.92 | 0.95 | 0.92 | 0.95 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 1848 | 758 | 0 | 1946 | 0 | 563 | 0 | 532 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 1848 | 758 | 0 | 1946 | 0 | 563 | 0 | 532 | 0 | 0 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% |
| Turn Type | | NA | Perm | | NA | | Prot | | Prot | | |
| Protected Phases | | Free! | | | 2 | | 8! | | 3 | | |
| Permitted Phases | | | Free | | | | | | | | |
| Actuated Green, G (s) | | 120.0 | 120.0 | | 63.6 | | 43.4 | | 43.4 | | |
| Effective Green, g (s) | | 120.0 | 120.0 | | 65.6 | | 45.4 | | 45.4 | | |
| Actuated g/C Ratio | | 1.00 | 1.00 | | 0.55 | | 0.38 | | 0.38 | | |
| Clearance Time (s) | | | | | 6.5 | | 6.5 | | 6.5 | | |
| Vehicle Extension (s) | | | | | 3.0 | | 2.5 | | 2.5 | | |
| Lane Grp Cap (vph) | | 5085 | 1583 | | 2779 | | 669 | | 1054 | | |
| v/s Ratio Prot | | 0.36 | | | c0.38 | | c0.32 | | 0.19 | | |
| v/s Ratio Perm | | | 0.48 | | | | | | | | |
| v/c Ratio | | 0.36 | 0.48 | | 0.70 | | 0.84 | | 0.50 | | |
| Uniform Delay, d1 | | 0.0 | 0.0 | | 20.0 | | 34.0 | | 28.7 | | |
| Progression Factor | | 1.00 | 1.00 | | 0.77 | | 1.00 | | 1.00 | | |
| Incremental Delay, d2 | | 0.1 | 0.6 | | 1.1 | | 9.3 | | 0.3 | | |
| Delay (s) | | 0.1 | 0.6 | | 16.4 | | 43.3 | | 28.9 | | |
| Level of Service | | A | A | | B | | D | | C | | |
| Approach Delay (s) | | 0.2 | | | 16.4 | | | 36.3 | | 0.0 | |
| Approach LOS | | A | | | B | | | D | | A | |
| Intersection Summary | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 12.8 | | HCM 2000 Level of Service | | | | B | | |
| HCM 2000 Volume to Capacity ratio | | | 0.76 | | | | | | | | |
| Actuated Cycle Length (s) | | | 120.0 | | Sum of lost time (s) | | | | 9.0 | | |
| Intersection Capacity Utilization | | | 59.8% | | ICU Level of Service | | | | B | | |
| Analysis Period (min) | | | 15 | | | | | | | | |
| ! Phase conflict between lane groups. | | | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | |

Queues

3: I-95 NB Ramp & Hillsboro Blvd



| Lane Group | EBT | WBT | WBR | NBL | NBR |
|-------------------------|------|------|------|------|------|
| Lane Group Flow (vph) | 1766 | 2163 | 674 | 598 | 716 |
| v/c Ratio | 0.60 | 0.73 | 0.43 | 0.39 | 0.79 |
| Control Delay | 10.4 | 10.0 | 0.5 | 17.0 | 24.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 10.4 | 10.0 | 0.5 | 17.0 | 24.9 |
| Queue Length 50th (ft) | 168 | 273 | 0 | 58 | 119 |
| Queue Length 95th (ft) | 189 | m242 | m0 | 84 | #193 |
| Internal Link Dist (ft) | 286 | 371 | | | |
| Turn Bay Length (ft) | | | 250 | 350 | 350 |
| Base Capacity (vph) | 2960 | 2960 | 1568 | 1580 | 926 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.60 | 0.73 | 0.43 | 0.38 | 0.77 |

Intersection Summary














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

Queue shown is maximum after two cycles.

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

HCM Signalized Intersection Capacity Analysis

3: I-95 NB Ramp & Hillsboro Blvd

| |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | ↑ | ↑↑↑ | | ↑↑ | | | | |
| Traffic Volume (vph) | 0 | 1625 | 0 | 0 | 1990 | 620 | 550 | 0 | 680 | 0 | 0 | 0 | |
| Future Volume (vph) | 0 | 1625 | 0 | 0 | 1990 | 620 | 550 | 0 | 680 | 0 | 0 | 0 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Total Lost time (s) | | 4.5 | | | 4.5 | 2.0 | 2.0 | | 2.0 | | | | |
| Lane Util. Factor | | 0.91 | | | 0.91 | 1.00 | 0.94 | | 0.88 | | | | |
| Frt | | 1.00 | | | 1.00 | 0.85 | 1.00 | | 0.85 | | | | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | | 1.00 | | | | |
| Satd. Flow (prot) | | 5085 | | | 5085 | 1568 | 4990 | | 2787 | | | | |
| Flt Permitted | | 1.00 | | | 1.00 | 1.00 | 0.95 | | 1.00 | | | | |
| Satd. Flow (perm) | | 5085 | | | 5085 | 1568 | 4990 | | 2787 | | | | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.95 | 0.92 | 0.92 | 0.92 | |
| Adj. Flow (vph) | 0 | 1766 | 0 | 0 | 2163 | 674 | 598 | 0 | 716 | 0 | 0 | 0 | |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 0 | |
| Lane Group Flow (vph) | 0 | 1766 | 0 | 0 | 2163 | 674 | 598 | 0 | 672 | 0 | 0 | 0 | |
| Heavy Vehicles (%) | 3% | 2% | 2% | 2% | 2% | 3% | 2% | 3% | 2% | 3% | 3% | 3% | |
| Turn Type | | NA | | | NA | Free | Prot | | Prot | | | | |
| Protected Phases | | 6 | | | 2 | | 4 | | 4 | | | | |
| Permitted Phases | | | | | | Free | | | | | | | |
| Actuated Green, G (s) | | 32.9 | | | 32.9 | 60.0 | 16.6 | | 16.6 | | | | |
| Effective Green, g (s) | | 34.9 | | | 34.9 | 60.0 | 18.6 | | 18.6 | | | | |
| Actuated g/C Ratio | | 0.58 | | | 0.58 | 1.00 | 0.31 | | 0.31 | | | | |
| Clearance Time (s) | | 6.5 | | | 6.5 | | 4.0 | | 4.0 | | | | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | 3.0 | | 3.0 | | | | |
| Lane Grp Cap (vph) | | 2957 | | | 2957 | 1568 | 1546 | | 863 | | | | |
| v/s Ratio Prot | | 0.35 | | | 0.43 | | 0.12 | | 0.24 | | | | |
| v/s Ratio Perm | | | | | | 0.43 | | | | | | | |
| v/c Ratio | | 0.60 | | | 0.73 | 0.43 | 0.39 | | 0.78 | | | | |
| Uniform Delay, d1 | | 8.0 | | | 9.1 | 0.0 | 16.2 | | 18.8 | | | | |
| Progression Factor | | 1.18 | | | 0.97 | 1.00 | 1.00 | | 1.00 | | | | |
| Incremental Delay, d2 | | 0.8 | | | 1.0 | 0.5 | 0.2 | | 4.5 | | | | |
| Delay (s) | | 10.3 | | | 9.9 | 0.5 | 16.4 | | 23.3 | | | | |
| Level of Service | | B | | | A | A | B | | C | | | | |
| Approach Delay (s) | | 10.3 | | | 7.7 | | | 20.2 | | | 0.0 | | |
| Approach LOS | | B | | | A | | | C | | | A | | |
| Intersection Summary | | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 11.2 | | | HCM 2000 Level of Service | | | | B | | | |
| HCM 2000 Volume to Capacity ratio | | | 0.74 | | | | | | | | | | |
| Actuated Cycle Length (s) | | | 60.0 | | | Sum of lost time (s) | | | | 6.5 | | | |
| Intersection Capacity Utilization | | | 62.3% | | | ICU Level of Service | | | | B | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | | |

Queues

4: SW Natura Boulevard/Fairway Drive & Hillsboro Blvd



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|-------|------|------|-------|------|------|------|------|------|
| Lane Group Flow (vph) | 87 | 2141 | 277 | 130 | 2239 | 33 | 288 | 11 | 125 | 37 | 54 | 310 |
| v/c Ratio | 0.43 | 0.75 | 0.29 | 0.99 | 0.76 | 0.03 | 1.05 | 0.03 | 0.30 | 0.14 | 0.19 | 0.85 |
| Control Delay | 66.1 | 15.4 | 4.2 | 132.5 | 22.4 | 0.1 | 112.4 | 38.3 | 6.1 | 33.5 | 42.4 | 46.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 66.1 | 15.4 | 4.2 | 132.5 | 22.4 | 0.1 | 112.4 | 38.3 | 6.1 | 33.5 | 42.4 | 46.3 |
| Queue Length 50th (ft) | 34 | 405 | 26 | 102 | 450 | 0 | ~241 | 7 | 0 | 23 | 37 | 129 |
| Queue Length 95th (ft) | m51 | 507 | m97 | #233 | 633 | 0 | #306 | 22 | 36 | 46 | 68 | 215 |
| Internal Link Dist (ft) | | 660 | | | 631 | | | 513 | | | 403 | |
| Turn Bay Length (ft) | 300 | | 150 | 100 | | 200 | 125 | | | | | 340 |
| Base Capacity (vph) | 200 | 2872 | 955 | 131 | 2952 | 978 | 274 | 589 | 600 | 272 | 589 | 600 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.43 | 0.75 | 0.29 | 0.99 | 0.76 | 0.03 | 1.05 | 0.02 | 0.21 | 0.14 | 0.09 | 0.52 |

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.































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

Queue shown is maximum after two cycles.

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













HCM Signalized Intersection Capacity Analysis

4: SW Natura Boulevard/Fairway Drive & Hillsboro Blvd

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |   |    |  |  |    |  |  |  |  |  |   |  |
| Traffic Volume (vph) | 80 | 1970 | 255 | 120 | 2060 | 30 | 265 | 10 | 115 | 34 | 50 | 285 |
| Future Volume (vph) | 80 | 1970 | 255 | 120 | 2060 | 30 | 265 | 10 | 115 | 34 | 50 | 285 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| Lane Util. Factor | 0.97 | 0.91 | 1.00 | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 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 | 5085 | 1583 | 1770 | 5085 | 1583 | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.67 | 1.00 | 1.00 | 0.75 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 5085 | 1583 | 1770 | 5085 | 1583 | 1248 | 1863 | 1583 | 1398 | 1863 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 87 | 2141 | 277 | 130 | 2239 | 33 | 288 | 11 | 125 | 37 | 54 | 310 |
| RTOR Reduction (vph) | 0 | 0 | 64 | 0 | 0 | 14 | 0 | 0 | 102 | 0 | 0 | 120 |
| Lane Group Flow (vph) | 87 | 2141 | 213 | 130 | 2239 | 19 | 288 | 11 | 23 | 37 | 54 | 190 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 7 | 4 | | 3 | 8 | |
| Permitted Phases | | | 6 | | | 2 | 4 | | 4 | 8 | | 8 |
| Actuated Green, G (s) | 5.0 | 63.4 | 63.4 | 6.9 | 65.3 | 65.3 | 26.3 | 22.3 | 22.3 | 23.1 | 20.7 | 20.7 |
| Effective Green, g (s) | 7.0 | 65.4 | 65.4 | 8.9 | 67.3 | 67.3 | 26.3 | 22.3 | 22.3 | 23.1 | 20.7 | 20.7 |
| Actuated g/C Ratio | 0.06 | 0.55 | 0.55 | 0.07 | 0.56 | 0.56 | 0.22 | 0.19 | 0.19 | 0.19 | 0.17 | 0.17 |
| Clearance Time (s) | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| Vehicle Extension (s) | 2.0 | 3.0 | 3.0 | 1.5 | 3.0 | 3.0 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 200 | 2771 | 862 | 131 | 2851 | 887 | 290 | 346 | 294 | 276 | 321 | 273 |
| v/s Ratio Prot | 0.03 | 0.42 | | c0.07 | c0.44 | | c0.03 | 0.01 | | 0.00 | 0.03 | |
| v/s Ratio Perm | | | 0.13 | | | 0.01 | c0.18 | | 0.01 | 0.02 | | 0.12 |
| v/c Ratio | 0.43 | 0.77 | 0.25 | 0.99 | 0.79 | 0.02 | 0.99 | 0.03 | 0.08 | 0.13 | 0.17 | 0.70 |
| Uniform Delay, d1 | 54.6 | 21.5 | 14.4 | 55.5 | 20.7 | 11.7 | 46.7 | 40.0 | 40.4 | 40.0 | 42.3 | 46.7 |
| Progression Factor | 1.11 | 0.66 | 0.47 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.4 | 1.7 | 0.5 | 75.9 | 2.3 | 0.0 | 50.7 | 0.0 | 0.0 | 0.1 | 0.1 | 6.1 |
| Delay (s) | 61.0 | 15.8 | 7.3 | 131.4 | 22.9 | 11.8 | 97.4 | 40.0 | 40.4 | 40.0 | 42.4 | 52.8 |
| Level of Service | E | B | A | F | C | B | F | D | D | D | D | D |
| Approach Delay (s) | | 16.4 | | | 28.7 | | | 79.1 | | | 50.2 | |
| Approach LOS | | B | | | C | | | E | | | D | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 28.5 | HCM 2000 Level of Service | | | | C | | | | |
| HCM 2000 Volume to Capacity ratio | | | 0.89 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 120.0 | Sum of lost time (s) | | | | 21.0 | | | | |
| Intersection Capacity Utilization | | | 85.9% | ICU Level of Service | | | | E | | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | |

Queues

1: S Military Trail & SR 869/SW 10th Street

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Group Flow (vph) | 337 | 837 | 185 | 527 | 978 | 511 | 185 | 549 | 353 | 299 | 679 | 527 |
| v/c Ratio | 0.80 | 0.64 | 0.22 | 0.86 | 0.65 | 0.55 | 0.71 | 0.73 | 0.48 | 0.71 | 0.74 | 0.85 |
| Control Delay | 91.4 | 51.7 | 6.3 | 69.4 | 46.1 | 28.0 | 96.7 | 72.2 | 26.0 | 84.9 | 65.9 | 41.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 91.4 | 51.7 | 6.3 | 69.4 | 46.1 | 28.0 | 96.7 | 72.2 | 26.0 | 84.9 | 65.9 | 41.4 |
| Queue Length 50th (ft) | 201 | 437 | 11 | 277 | 575 | 319 | 111 | 322 | 199 | 178 | 393 | 305 |
| Queue Length 95th (ft) | 261 | 560 | 66 | 354 | 680 | 579 | 159 | 385 | 285 | 225 | 437 | 446 |
| Internal Link Dist (ft) | | 620 | | | 1082 | | | 752 | | | 457 | |
| Turn Bay Length (ft) | 550 | | 500 | 550 | | 500 | 300 | | 300 | 650 | | 650 |
| Base Capacity (vph) | 448 | 1301 | 830 | 657 | 1498 | 995 | 268 | 797 | 754 | 564 | 1083 | 682 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.75 | 0.64 | 0.22 | 0.80 | 0.65 | 0.51 | 0.69 | 0.69 | 0.47 | 0.53 | 0.63 | 0.77 |
| Intersection Summary | | | | | | | | | | | | |

HCM Signalized Intersection Capacity Analysis

1: S Military Trail & SR 869/SW 10th Street

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
|-----------------------------------|------|------|-------|-------|-------|-------|------|------|-------|-------|------|---------------------------|------|
| Lane Configurations | | | | | | | | | | | | | |
| Traffic Volume (vph) | 310 | 770 | 170 | 485 | 900 | 470 | 170 | 505 | 325 | 275 | 625 | 485 | |
| Future Volume (vph) | 310 | 770 | 170 | 485 | 900 | 470 | 170 | 505 | 325 | 275 | 625 | 485 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Total Lost time (s) | 5.5 | 4.0 | 5.9 | 5.5 | 4.0 | 5.9 | 5.9 | 5.9 | 5.5 | 5.9 | 5.9 | 5.9 | |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 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 | 3539 | 1583 | 3433 | 3539 | 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 | 3539 | 1583 | 3433 | 3539 | 1583 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | |
| Adj. Flow (vph) | 337 | 837 | 185 | 527 | 978 | 511 | 185 | 549 | 353 | 299 | 679 | 527 | |
| RTOR Reduction (vph) | 0 | 0 | 93 | 0 | 0 | 34 | 0 | 0 | 69 | 0 | 0 | 211 | |
| Lane Group Flow (vph) | 337 | 837 | 92 | 527 | 978 | 477 | 185 | 549 | 284 | 299 | 679 | 316 | |
| Turn Type | Prot | NA | pm+ov | Prot | NA | pm+ov | Prot | NA | pm+ov | Prot | NA | Perm | |
| Protected Phases | 1 | 6 | 7 | 5 | 2 | 3 | 7 | 4 | 5 | 3 | 8 | | |
| Permitted Phases | | | 6 | | | 2 | | | 4 | | | 8 | |
| Actuated Green, G (s) | 20.1 | 64.2 | 75.9 | 30.2 | 74.3 | 94.5 | 11.7 | 36.1 | 66.3 | 20.2 | 44.6 | 44.6 | |
| Effective Green, g (s) | 22.1 | 66.2 | 79.9 | 32.2 | 76.3 | 98.5 | 13.7 | 38.1 | 70.3 | 22.2 | 46.6 | 46.6 | |
| Actuated g/C Ratio | 0.12 | 0.37 | 0.44 | 0.18 | 0.42 | 0.55 | 0.08 | 0.21 | 0.39 | 0.12 | 0.26 | 0.26 | |
| Clearance Time (s) | 7.5 | 6.0 | 7.9 | 7.5 | 6.0 | 7.9 | 7.9 | 7.9 | 7.5 | 7.9 | 7.9 | 7.9 | |
| Vehicle Extension (s) | 2.0 | 3.0 | 2.0 | 2.0 | 3.0 | 2.0 | 2.0 | 3.0 | 2.0 | 2.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 421 | 1301 | 702 | 614 | 1500 | 866 | 261 | 749 | 618 | 423 | 916 | 409 | |
| v/s Ratio Prot | 0.10 | 0.24 | 0.01 | c0.15 | c0.28 | 0.07 | 0.05 | 0.16 | 0.08 | c0.09 | 0.19 | | |
| v/s Ratio Perm | | | 0.05 | | | 0.23 | | | 0.10 | | | c0.20 | |
| v/c Ratio | 0.80 | 0.64 | 0.13 | 0.86 | 0.65 | 0.55 | 0.71 | 0.73 | 0.46 | 0.71 | 0.74 | 0.77 | |
| Uniform Delay, d1 | 76.8 | 47.1 | 29.5 | 71.7 | 41.3 | 26.4 | 81.2 | 66.2 | 40.7 | 75.8 | 61.2 | 61.8 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 0.80 | 1.03 | 1.23 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 9.9 | 2.5 | 0.0 | 8.9 | 1.7 | 0.3 | 7.0 | 3.7 | 0.2 | 4.4 | 3.3 | 8.8 | |
| Delay (s) | 86.7 | 49.6 | 29.6 | 66.5 | 44.2 | 32.8 | 88.2 | 69.9 | 40.9 | 80.1 | 64.4 | 70.5 | |
| Level of Service | F | D | C | E | D | C | F | E | D | F | E | E | |
| Approach Delay (s) | | 56.1 | | | 47.1 | | | 63.6 | | | 69.7 | | |
| Approach LOS | | E | | | D | | | E | | | E | | |
| Intersection Summary | | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 57.9 | | | | | | | | | HCM 2000 Level of Service | E |
| HCM 2000 Volume to Capacity ratio | | | 0.76 | | | | | | | | | | |
| Actuated Cycle Length (s) | | | 180.0 | | | | | | | | | Sum of lost time (s) | 21.3 |
| Intersection Capacity Utilization | | | 75.0% | | | | | | | | | ICU Level of Service | D |
| Analysis Period (min) | | | 15 | | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | | |

Queues

2: Newport Center Dr/SW 12th Avenue & SR 869/SW 10th Street

























| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | NBR | SBT | SBR |
|-------------------------|------|------|-------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 71 | 1647 | 109 | 1712 | 87 | 181 | 178 | 429 | 125 | 380 |
| v/c Ratio | 0.48 | 0.51 | 0.58 | 0.66 | 0.11 | 0.53 | 0.52 | 0.79 | 0.63 | 0.77 |
| Control Delay | 93.0 | 29.8 | 109.8 | 18.8 | 1.4 | 68.7 | 68.2 | 50.9 | 87.5 | 57.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 93.0 | 29.8 | 109.8 | 18.8 | 1.4 | 68.7 | 68.2 | 50.9 | 87.5 | 57.1 |
| Queue Length 50th (ft) | 44 | 491 | 64 | 341 | 2 | 201 | 196 | 330 | 141 | 170 |
| Queue Length 95th (ft) | m72 | 536 | m102 | 698 | m10 | 282 | 275 | 457 | 212 | 235 |
| Internal Link Dist (ft) | | 818 | | 925 | | | 616 | | 185 | |
| Turn Bay Length (ft) | 700 | | 750 | | 750 | | | 150 | | |
| Base Capacity (vph) | 149 | 3205 | 190 | 2610 | 826 | 410 | 413 | 550 | 257 | 564 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.48 | 0.51 | 0.57 | 0.66 | 0.11 | 0.44 | 0.43 | 0.78 | 0.49 | 0.67 |

Intersection Summary

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

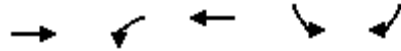
HCM Signalized Intersection Capacity Analysis

2: Newport Center Dr/SW 12th Avenue & SR 869/SW 10th Street

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  |  |  |  |  | |  |  |
| Traffic Volume (vph) | 65 | 1455 | 60 | 100 | 1575 | 80 | 320 | 10 | 395 | 110 | 5 | 350 |
| Future Volume (vph) | 65 | 1455 | 60 | 100 | 1575 | 80 | 320 | 10 | 395 | 110 | 5 | 350 |
| 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 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 |
| Lane Util. Factor | 0.97 | 0.86 | | 0.97 | 0.91 | 1.00 | 0.95 | 0.95 | 1.00 | | 1.00 | 0.88 |
| Frt | 1.00 | 0.99 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 | | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 0.96 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | 3367 | 6370 | | 3433 | 5085 | 1524 | 1681 | 1690 | 1583 | | 1545 | 2030 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 0.96 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (perm) | 3367 | 6370 | | 3433 | 5085 | 1524 | 1681 | 1690 | 1583 | | 1545 | 2030 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 71 | 1582 | 65 | 109 | 1712 | 87 | 348 | 11 | 429 | 120 | 5 | 380 |
| RTOR Reduction (vph) | 0 | 2 | 0 | 0 | 0 | 42 | 0 | 0 | 98 | 0 | 0 | 96 |
| Lane Group Flow (vph) | 71 | 1645 | 0 | 109 | 1712 | 45 | 181 | 178 | 331 | 0 | 125 | 284 |
| Heavy Vehicles (%) | 4% | 2% | 2% | 2% | 2% | 6% | 2% | 2% | 2% | 18% | 2% | 40% |
| Turn Type | Prot | NA | | Prot | NA | Prot | Split | NA | pt+ov | Split | NA | pt+ov |
| Protected Phases | 1 | 6 | | 5 | 2 | 2 | 3 | 3 | 3 5 | 4 | 4 | 4 1 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 6.0 | 88.5 | | 7.9 | 90.4 | 90.4 | 36.5 | 36.5 | 50.4 | | 23.1 | 35.1 |
| Effective Green, g (s) | 8.0 | 90.5 | | 9.9 | 92.4 | 92.4 | 36.5 | 36.5 | 50.4 | | 23.1 | 35.1 |
| Actuated g/C Ratio | 0.04 | 0.50 | | 0.06 | 0.51 | 0.51 | 0.20 | 0.20 | 0.28 | | 0.13 | 0.20 |
| Clearance Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 |
| Vehicle Extension (s) | 1.5 | 3.0 | | 2.5 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 149 | 3202 | | 188 | 2610 | 782 | 340 | 342 | 443 | | 198 | 395 |
| v/s Ratio Prot | 0.02 | 0.26 | | 0.03 | c0.34 | 0.03 | 0.11 | 0.11 | c0.21 | | 0.08 | c0.14 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.48 | 0.51 | | 0.58 | 0.66 | 0.06 | 0.53 | 0.52 | 0.75 | | 0.63 | 0.72 |
| Uniform Delay, d1 | 84.0 | 30.0 | | 83.0 | 32.1 | 22.0 | 64.1 | 63.9 | 59.0 | | 74.4 | 67.8 |
| Progression Factor | 0.99 | 0.92 | | 1.18 | 0.51 | 0.25 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.8 | 0.5 | | 3.2 | 1.2 | 0.1 | 1.6 | 1.4 | 6.8 | | 6.4 | 6.2 |
| Delay (s) | 84.2 | 28.0 | | 101.4 | 17.6 | 5.6 | 65.7 | 65.4 | 65.8 | | 80.8 | 74.0 |
| Level of Service | F | C | | F | B | A | E | E | E | | F | E |
| Approach Delay (s) | | 30.3 | | | 21.9 | | | 65.7 | | | 75.7 | |
| Approach LOS | | C | | | C | | | E | | | E | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 37.4 | | | | HCM 2000 Level of Service | | | D | | |
| HCM 2000 Volume to Capacity ratio | | | 0.73 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 180.0 | | | | Sum of lost time (s) | | | 22.0 | | |
| Intersection Capacity Utilization | | | 68.5% | | | | ICU Level of Service | | | C | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | |

Queues

3: SR 869/SW 10th Street & I-95 SB Off-Ramp




















| Lane Group | EBT | WBL | WBT | SBL | SBR |
|-------------------------|--------|------|------|------|------|
| Lane Group Flow (vph) | 2110 | 605 | 1473 | 232 | 421 |
| v/c Ratio | 1.02dr | 0.53 | 0.39 | 0.32 | 0.71 |
| Control Delay | 31.3 | 33.9 | 16.9 | 61.0 | 72.8 |
| Queue Delay | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| Total Delay | 31.3 | 33.9 | 17.0 | 61.0 | 72.8 |
| Queue Length 50th (ft) | 573 | 215 | 402 | 120 | 264 |
| Queue Length 95th (ft) | 215 | 234 | 463 | 164 | 337 |
| Internal Link Dist (ft) | 925 | | 315 | | |
| Turn Bay Length (ft) | | 500 | | 500 | 500 |
| Base Capacity (vph) | 2647 | 1144 | 3743 | 736 | 597 |
| Starvation Cap Reductn | 0 | 0 | 1066 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.80 | 0.53 | 0.55 | 0.32 | 0.71 |

Intersection Summary

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

HCM Signalized Intersection Capacity Analysis

3: SR 869/SW 10th Street & I-95 SB Off-Ramp

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | |  |  | | | | |  | |  |
| Traffic Volume (vph) | 0 | 1355 | 605 | 575 | 1355 | 0 | 0 | 0 | 0 | 220 | 0 | 400 |
| Future Volume (vph) | 0 | 1355 | 605 | 575 | 1355 | 0 | 0 | 0 | 0 | 220 | 0 | 400 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 4.0 | | 4.0 | 4.5 | | | | | 4.4 | | 4.4 |
| Lane Util. Factor | | 0.81 | | 0.97 | 0.91 | | | | | 0.97 | | 0.88 |
| Frt | | 0.95 | | 1.00 | 1.00 | | | | | 1.00 | | 0.85 |
| Flt Protected | | 1.00 | | 0.95 | 1.00 | | | | | 0.95 | | 1.00 |
| Satd. Flow (prot) | | 7202 | | 3433 | 5085 | | | | | 3433 | | 2787 |
| Flt Permitted | | 1.00 | | 0.95 | 1.00 | | | | | 0.95 | | 1.00 |
| Satd. Flow (perm) | | 7202 | | 3433 | 5085 | | | | | 3433 | | 2787 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.95 | 0.95 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 0 | 1473 | 637 | 605 | 1473 | 0 | 0 | 0 | 0 | 232 | 0 | 421 |
| RTOR Reduction (vph) | 0 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 2067 | 0 | 605 | 1473 | 0 | 0 | 0 | 0 | 232 | 0 | 421 |
| Turn Type | | NA | | Prot | NA | | | | | Prot | | Prot |
| Protected Phases | | 6 | | 5 4 | 2 4 | | | | | 3 | | 3 |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | | 63.0 | | 55.6 | 130.6 | | | | | 36.6 | | 36.6 |
| Effective Green, g (s) | | 65.0 | | 59.6 | 132.6 | | | | | 38.6 | | 38.6 |
| Actuated g/C Ratio | | 0.36 | | 0.33 | 0.74 | | | | | 0.21 | | 0.21 |
| Clearance Time (s) | | 6.0 | | | | | | | | 6.4 | | 6.4 |
| Vehicle Extension (s) | | 3.0 | | | | | | | | 2.0 | | 2.0 |
| Lane Grp Cap (vph) | | 2600 | | 1136 | 3745 | | | | | 736 | | 597 |
| v/s Ratio Prot | | c0.29 | | c0.18 | 0.29 | | | | | 0.07 | | c0.15 |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | | 1.02dr | | 0.53 | 0.39 | | | | | 0.32 | | 0.71 |
| Uniform Delay, d1 | | 51.5 | | 48.9 | 8.8 | | | | | 59.6 | | 65.4 |
| Progression Factor | | 0.58 | | 1.26 | 1.87 | | | | | 1.00 | | 1.00 |
| Incremental Delay, d2 | | 2.2 | | 0.5 | 0.1 | | | | | 0.1 | | 3.1 |
| Delay (s) | | 32.2 | | 62.1 | 16.5 | | | | | 59.7 | | 68.5 |
| Level of Service | | C | | E | B | | | | | E | | E |
| Approach Delay (s) | | 32.2 | | | 29.8 | | | 0.0 | | | 65.4 | |
| Approach LOS | | C | | | C | | | A | | | E | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 35.6 | | | HCM 2000 Level of Service | | | | D | | |
| HCM 2000 Volume to Capacity ratio | | | 0.68 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 180.0 | | | Sum of lost time (s) | | | | 16.8 | | |
| Intersection Capacity Utilization | | | 56.5% | | | ICU Level of Service | | | | B | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |
| dr Defacto Right Lane. Recode with 1 though lane as a right lane. | | | | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | |

Queues

4: I-95 NB On/Off-Ramp & SR 869/SW 10th Street



| Lane Group | EBT | EBR | WBT | NBL | NBR |
|-------------------------|------|------|------|------|------|
| Lane Group Flow (vph) | 886 | 800 | 2000 | 411 | 653 |
| v/c Ratio | 0.30 | 0.29 | 0.38 | 0.33 | 0.73 |
| Control Delay | 4.2 | 0.2 | 11.7 | 56.4 | 67.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 4.2 | 0.2 | 11.7 | 56.4 | 67.8 |
| Queue Length 50th (ft) | 22 | 0 | 350 | 142 | 314 |
| Queue Length 95th (ft) | 68 | 0 | 74 | 178 | 377 |
| Internal Link Dist (ft) | 240 | | 630 | 1225 | |
| Turn Bay Length (ft) | | 700 | | 410 | 430 |
| Base Capacity (vph) | 2939 | 2787 | 5301 | 1236 | 894 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.30 | 0.29 | 0.38 | 0.33 | 0.73 |

Intersection Summary

HCM Signalized Intersection Capacity Analysis

4: I-95 NB On/Off-Ramp & SR 869/SW 10th Street



| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|------------------------|-------|-------|------|-------|------|-------|
| Lane Configurations | ↑↑↑ | ↑↑ | | ↑↑↑↑ | ↑↑↑ | ↑↑↑ |
| Traffic Volume (vph) | 815 | 760 | 0 | 1840 | 390 | 620 |
| Future Volume (vph) | 815 | 760 | 0 | 1840 | 390 | 620 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 2.0 | | 4.5 | 4.4 | 4.4 |
| Lane Util. Factor | 0.91 | 0.88 | | 0.81 | 0.94 | 0.76 |
| Frt | 1.00 | 0.85 | | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 5085 | 2787 | | 7544 | 4990 | 3610 |
| Flt Permitted | 1.00 | 1.00 | | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 5085 | 2787 | | 7544 | 4990 | 3610 |
| Peak-hour factor, PHF | 0.92 | 0.95 | 0.92 | 0.92 | 0.95 | 0.95 |
| Adj. Flow (vph) | 886 | 800 | 0 | 2000 | 411 | 653 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 886 | 800 | 0 | 2000 | 411 | 653 |
| Turn Type | NA | Free | | NA | Prot | Prot |
| Protected Phases | 6 3 | | | 2 3 | 4 | 4 |
| Permitted Phases | | Free | | | | |
| Actuated Green, G (s) | 99.6 | 180.0 | | 124.5 | 42.6 | 42.6 |
| Effective Green, g (s) | 103.6 | 180.0 | | 122.1 | 44.6 | 44.6 |
| Actuated g/C Ratio | 0.58 | 1.00 | | 0.68 | 0.25 | 0.25 |
| Clearance Time (s) | | | | | 6.4 | 6.4 |
| Vehicle Extension (s) | | | | | 3.5 | 3.5 |
| Lane Grp Cap (vph) | 2926 | 2787 | | 5117 | 1236 | 894 |
| v/s Ratio Prot | 0.17 | | | c0.27 | 0.08 | c0.18 |
| v/s Ratio Perm | | 0.29 | | | | |
| v/c Ratio | 0.30 | 0.29 | | 0.39 | 0.33 | 0.73 |
| Uniform Delay, d1 | 19.6 | 0.0 | | 12.7 | 55.5 | 62.2 |
| Progression Factor | 0.36 | 1.00 | | 1.06 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.0 | 0.2 | | 0.0 | 0.2 | 3.2 |
| Delay (s) | 7.1 | 0.2 | | 13.5 | 55.7 | 65.4 |
| Level of Service | A | A | | B | E | E |
| Approach Delay (s) | 3.8 | | | 13.5 | 61.6 | |
| Approach LOS | A | | | B | E | |













Intersection Summary

| | | | |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay | 20.8 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.50 | | |
| Actuated Cycle Length (s) | 180.0 | Sum of lost time (s) | 18.8 |
| Intersection Capacity Utilization | 52.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group




































Queues

5: Research Park Boulevard/SW Natura Boulevard & SR 869/SW 10th Street

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Group Flow (vph) | 277 | 1043 | 239 | 207 | 1277 | 120 | 310 | 98 | 120 | 239 | 245 | 413 |
| v/c Ratio | 0.74 | 0.44 | 0.28 | 0.69 | 0.57 | 0.16 | 0.84 | 0.12 | 0.26 | 0.62 | 0.78 | 0.91 |
| Control Delay | 89.1 | 24.9 | 8.9 | 91.4 | 40.3 | 5.6 | 62.6 | 51.1 | 8.0 | 50.6 | 87.6 | 55.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 89.1 | 24.9 | 8.9 | 91.4 | 40.3 | 5.6 | 62.6 | 51.1 | 8.0 | 50.6 | 87.6 | 55.9 |
| Queue Length 50th (ft) | 163 | 323 | 53 | 124 | 412 | 0 | 281 | 48 | 0 | 207 | 284 | 239 |
| Queue Length 95th (ft) | 203 | 487 | 173 | 172 | 541 | 46 | 331 | 68 | 51 | 250 | 354 | 356 |
| Internal Link Dist (ft) | | 630 | | | 1233 | | | 1112 | | | 1327 | |
| Turn Bay Length (ft) | 300 | | 300 | 200 | | 300 | 260 | | 260 | 170 | | 170 |
| Base Capacity (vph) | 419 | 2366 | 864 | 335 | 2260 | 772 | 383 | 1205 | 618 | 386 | 489 | 584 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.66 | 0.44 | 0.28 | 0.62 | 0.57 | 0.16 | 0.81 | 0.08 | 0.19 | 0.62 | 0.50 | 0.71 |
| Intersection Summary | | | | | | | | | | | | |

HCM Signalized Intersection Capacity Analysis

5: Research Park Boulevard/SW Natura Boulevard & SR 869/SW 10th Street

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |    |    |  |    |    |  |  |   |  |   |   |  |
| Traffic Volume (vph) | 255 | 960 | 220 | 190 | 1175 | 110 | 285 | 90 | 110 | 220 | 225 | 380 |
| Future Volume (vph) | 255 | 960 | 220 | 190 | 1175 | 110 | 285 | 90 | 110 | 220 | 225 | 380 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 |
| Lane Util. Factor | 0.97 | 0.91 | 1.00 | 0.97 | 0.91 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 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 | 5085 | 1583 | 3433 | 5085 | 1583 | 1770 | 3539 | 1583 | 1770 | 1863 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.21 | 1.00 | 1.00 | 0.69 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 5085 | 1583 | 3433 | 5085 | 1583 | 392 | 3539 | 1583 | 1286 | 1863 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 277 | 1043 | 239 | 207 | 1277 | 120 | 310 | 98 | 120 | 239 | 245 | 413 |
| RTOR Reduction (vph) | 0 | 0 | 128 | 0 | 0 | 67 | 0 | 0 | 91 | 0 | 0 | 189 |
| Lane Group Flow (vph) | 277 | 1043 | 111 | 207 | 1277 | 53 | 310 | 98 | 29 | 239 | 245 | 224 |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 7 | 4 | | 3 | 8 | |
| Permitted Phases | | | 6 | | | 2 | 4 | | 4 | 8 | | 8 |
| Actuated Green, G (s) | 17.6 | 81.7 | 81.7 | 13.9 | 78.0 | 78.0 | 65.9 | 43.2 | 43.2 | 47.4 | 30.4 | 30.4 |
| Effective Green, g (s) | 19.6 | 83.7 | 83.7 | 15.9 | 80.0 | 80.0 | 65.9 | 43.2 | 43.2 | 47.4 | 30.4 | 30.4 |
| Actuated g/C Ratio | 0.11 | 0.47 | 0.47 | 0.09 | 0.44 | 0.44 | 0.37 | 0.24 | 0.24 | 0.26 | 0.17 | 0.17 |
| Clearance Time (s) | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 |
| Vehicle Extension (s) | 1.5 | 3.0 | 3.0 | 1.5 | 3.0 | 3.0 | 1.5 | 2.0 | 2.0 | 1.5 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 373 | 2364 | 736 | 303 | 2260 | 703 | 371 | 849 | 379 | 384 | 314 | 267 |
| v/s Ratio Prot | c0.08 | c0.21 | | 0.06 | c0.25 | | c0.14 | 0.03 | | 0.06 | 0.13 | |
| v/s Ratio Perm | | | 0.07 | | | 0.03 | c0.17 | | 0.02 | 0.11 | | 0.14 |
| v/c Ratio | 0.74 | 0.44 | 0.15 | 0.68 | 0.57 | 0.08 | 0.84 | 0.12 | 0.08 | 0.62 | 0.78 | 0.84 |
| Uniform Delay, d1 | 77.8 | 32.4 | 27.7 | 79.6 | 37.1 | 28.7 | 46.0 | 53.5 | 52.9 | 56.6 | 71.6 | 72.4 |
| Progression Factor | 1.00 | 0.71 | 2.18 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 6.1 | 0.1 | 0.1 | 5.0 | 1.0 | 0.2 | 14.3 | 0.0 | 0.0 | 2.3 | 11.0 | 19.1 |
| Delay (s) | 84.2 | 23.2 | 60.5 | 84.6 | 38.1 | 29.0 | 60.3 | 53.5 | 53.0 | 58.8 | 82.6 | 91.5 |
| Level of Service | F | C | E | F | D | C | E | D | D | E | F | F |
| Approach Delay (s) | | 39.8 | | | 43.4 | | | 57.4 | | | 80.4 | |
| Approach LOS | | D | | | D | | | E | | | F | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 51.0 | | | HCM 2000 Level of Service | | D | | | | |
| HCM 2000 Volume to Capacity ratio | | | 0.70 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 180.0 | | | Sum of lost time (s) | | 20.2 | | | | |
| Intersection Capacity Utilization | | | 75.2% | | | ICU Level of Service | | D | | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | |

Queues

1: NW 5th Terr & Sample Road



| Lane Group | EBT | WBL | WBT | NBL | NBR |
|-------------------------|------|-------|------|------|------|
| Lane Group Flow (vph) | 2522 | 261 | 2255 | 114 | 120 |
| v/c Ratio | 0.59 | 0.87 | 0.56 | 0.65 | 0.45 |
| Control Delay | 19.1 | 77.5 | 2.0 | 72.8 | 14.3 |
| Queue Delay | 0.0 | 52.4 | 0.2 | 0.0 | 0.0 |
| Total Delay | 19.2 | 130.0 | 2.2 | 72.8 | 14.3 |
| Queue Length 50th (ft) | 323 | 167 | 49 | 94 | 0 |
| Queue Length 95th (ft) | 389 | #359 | 31 | 152 | 57 |
| Internal Link Dist (ft) | 575 | | 175 | 531 | |
| Turn Bay Length (ft) | | | | | |
| Base Capacity (vph) | 4280 | 299 | 3992 | 503 | 536 |
| Starvation Cap Reductn | 0 | 62 | 690 | 0 | 0 |
| Spillback Cap Reductn | 112 | 0 | 0 | 0 | 1 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.61 | 1.10 | 0.68 | 0.23 | 0.22 |

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

1: NW 5th Terr & Sample Road

| | → | ↘ | ↙ | ← | ↖ | ↗ |
|------------------------|-------|------|-------|-------|-------|------|
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑↑↑↑ | | ↘ | ↑↑↑ | ↘ | ↗ |
| Traffic Volume (vph) | 2240 | 80 | 240 | 2075 | 105 | 110 |
| Future Volume (vph) | 2240 | 80 | 240 | 2075 | 105 | 110 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 6.0 | | 6.0 | 6.0 | 9.0 | 9.0 |
| Lane Util. Factor | 0.81 | | 1.00 | 0.91 | 1.00 | 1.00 |
| Frt | 0.99 | | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 7505 | | 1770 | 5085 | 1770 | 1583 |
| Flt Permitted | 1.00 | | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 7505 | | 1770 | 5085 | 1770 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 2435 | 87 | 261 | 2255 | 114 | 120 |
| RTOR Reduction (vph) | 3 | 0 | 0 | 0 | 0 | 108 |
| Lane Group Flow (vph) | 2519 | 0 | 261 | 2255 | 114 | 12 |
| Turn Type | NA | | Prot | NA | Prot | Perm |
| Protected Phases | 2 3 | | 1 | 1 2 3 | 4 | |
| Permitted Phases | | | | | 4 | 4 |
| Actuated Green, G (s) | 72.1 | | 20.0 | 100.1 | 12.9 | 12.9 |
| Effective Green, g (s) | 74.1 | | 22.0 | 102.1 | 12.9 | 12.9 |
| Actuated g/C Ratio | 0.57 | | 0.17 | 0.79 | 0.10 | 0.10 |
| Clearance Time (s) | | | 8.0 | | 9.0 | 9.0 |
| Vehicle Extension (s) | | | 1.5 | | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 4277 | | 299 | 3993 | 175 | 157 |
| v/s Ratio Prot | c0.34 | | c0.15 | c0.44 | c0.06 | |
| v/s Ratio Perm | | | | | | 0.01 |
| v/c Ratio | 0.59 | | 0.87 | 0.56 | 0.65 | 0.08 |
| Uniform Delay, d1 | 18.1 | | 52.6 | 5.4 | 56.4 | 53.1 |
| Progression Factor | 1.00 | | 1.01 | 0.27 | 1.00 | 1.00 |
| Incremental Delay, d2 | 0.1 | | 19.4 | 0.1 | 6.5 | 0.1 |
| Delay (s) | 18.2 | | 72.7 | 1.5 | 62.8 | 53.2 |
| Level of Service | B | | E | A | E | D |
| Approach Delay (s) | 18.2 | | | 8.9 | 57.9 | |
| Approach LOS | B | | | A | E | |

Intersection Summary

| | | | |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay | 15.5 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.69 | | |
| Actuated Cycle Length (s) | 130.0 | Sum of lost time (s) | 27.0 |
| Intersection Capacity Utilization | 63.6% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

Queues

2: Sample Road & NW 5th Ave



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 179 | 2375 | 2359 | 272 | 185 | 158 |
| v/c Ratio | 0.82 | 0.47 | 0.60 | 0.25 | 0.54 | 0.53 |
| Control Delay | 63.9 | 2.0 | 12.8 | 0.9 | 61.0 | 14.3 |
| Queue Delay | 6.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Delay | 69.9 | 2.0 | 12.9 | 0.9 | 61.0 | 14.4 |
| Queue Length 50th (ft) | 149 | 23 | 301 | 1 | 77 | 0 |
| Queue Length 95th (ft) | #277 | 35 | 406 | m15 | 112 | 64 |
| Internal Link Dist (ft) | | 175 | 1004 | | 271 | |
| Turn Bay Length (ft) | | | | 450 | | |
| Base Capacity (vph) | 217 | 5031 | 3947 | 1079 | 977 | 563 |
| Starvation Cap Reductn | 16 | 786 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 124 | 0 | 0 | 51 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.89 | 0.56 | 0.62 | 0.25 | 0.19 | 0.31 |

Intersection Summary

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

Queue shown is maximum after two cycles.

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

HCM Signalized Intersection Capacity Analysis

2: Sample Road & NW 5th Ave



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|------------------------|-------|-------|-------|------|-------|------|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 165 | 2185 | 2170 | 250 | 170 | 145 |
| Future Volume (vph) | 165 | 2185 | 2170 | 250 | 170 | 145 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 6.0 | 6.0 | 6.0 | 6.0 | 9.0 | 9.0 |
| Lane Util. Factor | 1.00 | 0.86 | 0.86 | 1.00 | 0.97 | 1.00 |
| Frt | 1.00 | 1.00 | 1.00 | 0.85 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 1770 | 6408 | 6408 | 1583 | 3433 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 1770 | 6408 | 6408 | 1583 | 3433 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 179 | 2375 | 2359 | 272 | 185 | 158 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 104 | 0 | 142 |
| Lane Group Flow (vph) | 179 | 2375 | 2359 | 168 | 185 | 16 |
| Turn Type | Prot | NA | NA | Perm | Prot | Perm |
| Protected Phases | 3 | 1 2 3 | 1 2 | | 4 | |
| Permitted Phases | | | | 1 2 | | 4 |
| Actuated Green, G (s) | 14.0 | 100.1 | 78.1 | 78.1 | 12.9 | 12.9 |
| Effective Green, g (s) | 16.0 | 102.1 | 80.1 | 80.1 | 12.9 | 12.9 |
| Actuated g/C Ratio | 0.12 | 0.79 | 0.62 | 0.62 | 0.10 | 0.10 |
| Clearance Time (s) | 8.0 | | | | 9.0 | 9.0 |
| Vehicle Extension (s) | 1.5 | | | | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 217 | 5032 | 3948 | 975 | 340 | 157 |
| v/s Ratio Prot | c0.10 | 0.37 | c0.37 | | c0.05 | |
| v/s Ratio Perm | | | | 0.11 | | 0.01 |
| v/c Ratio | 0.82 | 0.47 | 0.60 | 0.17 | 0.54 | 0.10 |
| Uniform Delay, d1 | 55.6 | 4.8 | 15.2 | 10.7 | 55.8 | 53.3 |
| Progression Factor | 0.68 | 0.34 | 0.79 | 0.38 | 1.00 | 1.00 |
| Incremental Delay, d2 | 17.8 | 0.0 | 0.1 | 0.0 | 1.0 | 0.1 |
| Delay (s) | 55.7 | 1.6 | 12.1 | 4.1 | 56.7 | 53.4 |
| Level of Service | E | A | B | A | E | D |
| Approach Delay (s) | | 5.4 | 11.2 | | 55.2 | |
| Approach LOS | | A | B | | E | |

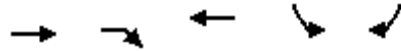
Intersection Summary

| | | | |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay | 11.3 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.66 | | |
| Actuated Cycle Length (s) | 130.0 | Sum of lost time (s) | 27.0 |
| Intersection Capacity Utilization | 63.1% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

Queues

3: Sample Road & I-95 SB RAMP



| Lane Group | EBT | EBR | WBT | SBL2 | SBR |
|-------------------------|------|------|------|------|------|
| Lane Group Flow (vph) | 1897 | 642 | 1946 | 474 | 663 |
| v/c Ratio | 0.56 | 0.41 | 0.73 | 0.46 | 0.78 |
| Control Delay | 9.4 | 1.4 | 13.9 | 19.7 | 28.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 9.4 | 1.4 | 13.9 | 19.7 | 28.4 |
| Queue Length 50th (ft) | 152 | 4 | 243 | 75 | 131 |
| Queue Length 95th (ft) | 263 | 29 | m238 | 114 | #196 |
| Internal Link Dist (ft) | 1004 | | 259 | | |
| Turn Bay Length (ft) | | 250 | | | |
| Base Capacity (vph) | 3379 | 1583 | 2681 | 1082 | 878 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.56 | 0.41 | 0.73 | 0.44 | 0.76 |

Intersection Summary












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

Queue shown is maximum after two cycles.

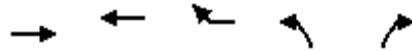
m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

3: Sample Road & I-95 SB RAMP

| |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | SBL2 | SBL | SBR | NWL | NWR |
| Lane Configurations | | ↑↑↑ | ↗ | | ↑↑↑ | | ↘↘ | | ↘↘ | | |
| Traffic Volume (vph) | 0 | 1745 | 610 | 0 | 1790 | 0 | 450 | 0 | 630 | 0 | 0 |
| Future Volume (vph) | 0 | 1745 | 610 | 0 | 1790 | 0 | 450 | 0 | 630 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 5.5 | 2.0 | | 5.5 | | 5.5 | | 5.5 | | |
| Lane Util. Factor | | 0.86 | 1.00 | | 0.91 | | 0.97 | | 0.88 | | |
| Frt | | 1.00 | 0.85 | | 1.00 | | 1.00 | | 0.85 | | |
| Flt Protected | | 1.00 | 1.00 | | 1.00 | | 0.95 | | 1.00 | | |
| Satd. Flow (prot) | | 6408 | 1583 | | 5085 | | 3433 | | 2787 | | |
| Flt Permitted | | 1.00 | 1.00 | | 1.00 | | 0.95 | | 1.00 | | |
| Satd. Flow (perm) | | 6408 | 1583 | | 5085 | | 3433 | | 2787 | | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.95 | 0.92 | 0.92 | 0.92 | 0.95 | 0.92 | 0.95 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 1897 | 642 | 0 | 1946 | 0 | 474 | 0 | 663 | 0 | 0 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 1897 | 642 | 0 | 1946 | 0 | 474 | 0 | 663 | 0 | 0 |
| Turn Type | | NA | Free | | NA | | Prot | | Prot | | |
| Protected Phases | | 6 | | | 2 | | 3 | | 3 | | |
| Permitted Phases | | | Free | | | | | | | | |
| Actuated Green, G (s) | | 32.3 | 65.0 | | 32.3 | | 17.7 | | 17.7 | | |
| Effective Green, g (s) | | 34.3 | 65.0 | | 34.3 | | 19.7 | | 19.7 | | |
| Actuated g/C Ratio | | 0.53 | 1.00 | | 0.53 | | 0.30 | | 0.30 | | |
| Clearance Time (s) | | 7.5 | | | 7.5 | | 7.5 | | 7.5 | | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | 2.5 | | 2.5 | | |
| Lane Grp Cap (vph) | | 3381 | 1583 | | 2683 | | 1040 | | 844 | | |
| v/s Ratio Prot | | 0.30 | | | 0.38 | | 0.14 | | 0.24 | | |
| v/s Ratio Perm | | | 0.41 | | | | | | | | |
| v/c Ratio | | 0.56 | 0.41 | | 0.73 | | 0.46 | | 0.79 | | |
| Uniform Delay, d1 | | 10.3 | 0.0 | | 11.7 | | 18.3 | | 20.7 | | |
| Progression Factor | | 0.84 | 1.00 | | 1.06 | | 1.00 | | 1.00 | | |
| Incremental Delay, d2 | | 0.6 | 0.7 | | 1.1 | | 0.2 | | 4.7 | | |
| Delay (s) | | 9.2 | 0.7 | | 13.6 | | 18.5 | | 25.4 | | |
| Level of Service | | A | A | | B | | B | | C | | |
| Approach Delay (s) | | 7.1 | | | 13.6 | | | 22.5 | | 0.0 | |
| Approach LOS | | A | | | B | | | C | | A | |
| Intersection Summary | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 12.4 | | | | HCM 2000 Level of Service | | B | | |
| HCM 2000 Volume to Capacity ratio | | | 0.75 | | | | | | | | |
| Actuated Cycle Length (s) | | | 65.0 | | | | Sum of lost time (s) | | 11.0 | | |
| Intersection Capacity Utilization | | | 65.8% | | | | ICU Level of Service | | C | | |
| Analysis Period (min) | | | 15 | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | |

Queues



| Lane Group | EBT | WBT | WBR | NBL2 | NBR |
|-------------------------|------|------|------|------|------|
| Lane Group Flow (vph) | 1712 | 1685 | 358 | 1063 | 579 |
| v/c Ratio | 0.65 | 0.64 | 0.23 | 0.98 | 0.66 |
| Control Delay | 7.4 | 9.5 | 0.2 | 47.9 | 23.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 7.4 | 9.5 | 0.2 | 47.9 | 23.6 |
| Queue Length 50th (ft) | 57 | 126 | 0 | 212 | 110 |
| Queue Length 95th (ft) | 62 | m283 | m0 | #338 | 167 |
| Internal Link Dist (ft) | 270 | 1155 | | | |
| Turn Bay Length (ft) | | | 250 | | |
| Base Capacity (vph) | 2620 | 2620 | 1583 | 1082 | 878 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.65 | 0.64 | 0.23 | 0.98 | 0.66 |

Intersection Summary













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

Queue shown is maximum after two cycles.

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

HCM Signalized Intersection Capacity Analysis

4: I-95 NB RAMP & Sample Road

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL2 | NBL | NBR | SEL | SER | |
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | ↑ | ↑↑ | | ↑↑ | | | |
| Traffic Volume (vph) | 0 | 1575 | 0 | 0 | 1550 | 340 | 1010 | 0 | 550 | 0 | 0 | |
| Future Volume (vph) | 0 | 1575 | 0 | 0 | 1550 | 340 | 1010 | 0 | 550 | 0 | 0 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Total Lost time (s) | | 5.5 | | | 5.5 | 2.0 | 5.5 | | 5.5 | | | |
| Lane Util. Factor | | 0.91 | | | 0.91 | 1.00 | 0.97 | | 0.88 | | | |
| Frt | | 1.00 | | | 1.00 | 0.85 | 1.00 | | 0.85 | | | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | | 1.00 | | | |
| Satd. Flow (prot) | | 5085 | | | 5085 | 1583 | 3433 | | 2787 | | | |
| Flt Permitted | | 1.00 | | | 1.00 | 1.00 | 0.95 | | 1.00 | | | |
| Satd. Flow (perm) | | 5085 | | | 5085 | 1583 | 3433 | | 2787 | | | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.95 | 0.95 | 0.92 | 0.95 | 0.92 | 0.92 | |
| Adj. Flow (vph) | 0 | 1712 | 0 | 0 | 1685 | 358 | 1063 | 0 | 579 | 0 | 0 | |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Lane Group Flow (vph) | 0 | 1712 | 0 | 0 | 1685 | 358 | 1063 | 0 | 579 | 0 | 0 | |
| Turn Type | | NA | | | NA | Free | Prot | | Prot | | | |
| Protected Phases | | 6 | | | 2 | | 4 | | 4 | | | |
| Permitted Phases | | | | | | Free | | | | | | |
| Actuated Green, G (s) | | 31.5 | | | 31.5 | 65.0 | 18.5 | | 18.5 | | | |
| Effective Green, g (s) | | 33.5 | | | 33.5 | 65.0 | 20.5 | | 20.5 | | | |
| Actuated g/C Ratio | | 0.52 | | | 0.52 | 1.00 | 0.32 | | 0.32 | | | |
| Clearance Time (s) | | 7.5 | | | 7.5 | | 7.5 | | 7.5 | | | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | 2.5 | | 2.5 | | | |
| Lane Grp Cap (vph) | | 2620 | | | 2620 | 1583 | 1082 | | 878 | | | |
| v/s Ratio Prot | | c0.34 | | | 0.33 | | c0.31 | | 0.21 | | | |
| v/s Ratio Perm | | | | | | 0.23 | | | | | | |
| v/c Ratio | | 0.65 | | | 0.64 | 0.23 | 0.98 | | 0.66 | | | |
| Uniform Delay, d1 | | 11.5 | | | 11.4 | 0.0 | 22.1 | | 19.2 | | | |
| Progression Factor | | 0.55 | | | 0.76 | 1.00 | 1.00 | | 1.00 | | | |
| Incremental Delay, d2 | | 0.5 | | | 0.8 | 0.2 | 23.0 | | 1.6 | | | |
| Delay (s) | | 6.8 | | | 9.4 | 0.2 | 45.1 | | 20.8 | | | |
| Level of Service | | A | | | A | A | D | | C | | | |
| Approach Delay (s) | | 6.8 | | | 7.8 | | | 36.5 | | 0.0 | | |
| Approach LOS | | A | | | A | | | D | | A | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 2000 Control Delay | | | 16.2 | | | | HCM 2000 Level of Service | | | B | | |
| HCM 2000 Volume to Capacity ratio | | | 0.78 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 65.0 | | | | Sum of lost time (s) | | | 11.0 | | |
| Intersection Capacity Utilization | | | 58.8% | | | | ICU Level of Service | | | B | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

c Critical Lane Group

Queues

5: NE 3rd Ave & Sample Road






























| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 467 | 1843 | 98 | 1571 | 228 | 326 | 98 | 71 | 255 | 375 |
| v/c Ratio | 0.86 | 0.73 | 0.74 | 0.74 | 0.96 | 0.76 | 0.19 | 0.41 | 0.78 | 0.80 |
| Control Delay | 63.9 | 21.1 | 89.8 | 35.2 | 89.0 | 58.5 | 0.8 | 39.8 | 66.9 | 31.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 63.9 | 21.1 | 89.8 | 35.2 | 89.0 | 58.5 | 0.8 | 39.8 | 66.9 | 31.5 |
| Queue Length 50th (ft) | 188 | 351 | 82 | 399 | 156 | 266 | 0 | 44 | 209 | 119 |
| Queue Length 95th (ft) | #284 | 483 | #171 | 523 | #210 | 342 | 0 | 74 | 279 | 223 |
| Internal Link Dist (ft) | | 1155 | | 834 | | 912 | | | 742 | |
| Turn Bay Length (ft) | 550 | | 490 | | 250 | | 225 | 200 | | |
| Base Capacity (vph) | 554 | 2528 | 136 | 2120 | 237 | 530 | 594 | 174 | 458 | 565 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.84 | 0.73 | 0.72 | 0.74 | 0.96 | 0.62 | 0.16 | 0.41 | 0.56 | 0.66 |

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis

5: NE 3rd Ave & Sample Road

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |   |    | |  |    | |  |  |  |  |  |  |
| Traffic Volume (vph) | 430 | 1515 | 180 | 90 | 1335 | 110 | 210 | 300 | 90 | 65 | 235 | 345 |
| Future Volume (vph) | 430 | 1515 | 180 | 90 | 1335 | 110 | 210 | 300 | 90 | 65 | 235 | 345 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| Lane Util. Factor | 0.97 | 0.91 | | 1.00 | 0.91 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.98 | | 1.00 | 0.99 | | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 |
| Satd. Flow (prot) | 3433 | 5004 | | 1770 | 5027 | | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.25 | 1.00 | 1.00 | 0.33 | 1.00 | 1.00 |
| Satd. Flow (perm) | 3433 | 5004 | | 1770 | 5027 | | 467 | 1863 | 1583 | 607 | 1863 | 1583 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 467 | 1647 | 196 | 98 | 1451 | 120 | 228 | 326 | 98 | 71 | 255 | 375 |
| RTOR Reduction (vph) | 0 | 10 | 0 | 0 | 6 | 0 | 0 | 0 | 75 | 0 | 0 | 190 |
| Lane Group Flow (vph) | 467 | 1833 | 0 | 98 | 1565 | 0 | 228 | 326 | 23 | 71 | 255 | 185 |
| Turn Type | Prot | NA | | Prot | NA | | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 1 | 6 | | 5 | 2 | | 7 | 4 | | 3 | 8 | |
| Permitted Phases | | | | | | | 4 | | 4 | 8 | | 8 |
| Actuated Green, G (s) | 18.5 | 62.3 | | 7.7 | 51.5 | | 40.0 | 30.0 | 30.0 | 28.0 | 24.0 | 24.0 |
| Effective Green, g (s) | 20.5 | 64.3 | | 9.7 | 53.5 | | 40.0 | 30.0 | 30.0 | 28.0 | 24.0 | 24.0 |
| Actuated g/C Ratio | 0.16 | 0.49 | | 0.07 | 0.41 | | 0.31 | 0.23 | 0.23 | 0.22 | 0.18 | 0.18 |
| Clearance Time (s) | 7.0 | 7.0 | | 7.0 | 7.0 | | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| Vehicle Extension (s) | 1.5 | 3.0 | | 1.5 | 3.0 | | 1.5 | 2.0 | 2.0 | 1.5 | 2.0 | 2.0 |
| Lane Grp Cap (vph) | 541 | 2475 | | 132 | 2068 | | 243 | 429 | 365 | 166 | 343 | 292 |
| v/s Ratio Prot | c0.14 | c0.37 | | 0.06 | 0.31 | | c0.07 | 0.18 | | 0.01 | 0.14 | |
| v/s Ratio Perm | | | | | | | c0.22 | | 0.01 | 0.08 | | 0.12 |
| v/c Ratio | 0.86 | 0.74 | | 0.74 | 0.76 | | 0.94 | 0.76 | 0.06 | 0.43 | 0.74 | 0.63 |
| Uniform Delay, d1 | 53.4 | 26.2 | | 58.9 | 32.7 | | 41.2 | 46.6 | 39.0 | 42.6 | 50.1 | 48.9 |
| Progression Factor | 0.95 | 0.75 | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 10.2 | 1.5 | | 17.7 | 2.6 | | 40.2 | 6.7 | 0.0 | 0.6 | 7.4 | 3.3 |
| Delay (s) | 60.9 | 21.1 | | 76.7 | 35.3 | | 81.4 | 53.4 | 39.0 | 43.3 | 57.5 | 52.2 |
| Level of Service | E | C | | E | D | | F | D | D | D | E | D |
| Approach Delay (s) | | 29.2 | | | 37.8 | | | 61.0 | | | 53.2 | |
| Approach LOS | | C | | | D | | | E | | | D | |

| Intersection Summary | | | |
|-----------------------------------|-------|---------------------------|------|
| HCM 2000 Control Delay | 38.9 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.87 | | |
| Actuated Cycle Length (s) | 130.0 | Sum of lost time (s) | 22.0 |
| Intersection Capacity Utilization | 82.8% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group