

Appendix B: Synchro Report

Prepared for the City of Littleton | February 2024



Existing Conditions - Synchro Results
Main Street & Prince Street

HCM 6th Signalized Intersection Summary
 96: S Prince St & Main St

01/30/2024



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|-----|------|-----|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | ↕↕ | ↗ | ↖ | ↑ | | | ↑ | ↗ |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 103 | 397 | 37 | 67 | 202 | 0 | 0 | 196 | 25 |
| Future Volume (veh/h) | 0 | 0 | 0 | 103 | 397 | 37 | 67 | 202 | 0 | 0 | 196 | 25 |
| Initial Q (Qb), veh | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | | | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | | | No | | | No | | | No | | |
| Adj Sat Flow, veh/h/ln | | | | 1841 | 1856 | 1767 | 1841 | 1870 | 0 | 0 | 1841 | 1841 |
| Adj Flow Rate, veh/h | | | | 123 | 473 | 44 | 80 | 240 | 0 | 0 | 233 | 30 |
| Peak Hour Factor | | | | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 |
| Percent Heavy Veh, % | | | | 4 | 3 | 9 | 4 | 2 | 0 | 0 | 4 | 4 |
| Cap, veh/h | | | | 289 | 1180 | 614 | 487 | 916 | 0 | 0 | 734 | 622 |
| Arrive On Green | | | | 0.41 | 0.41 | 0.41 | 0.08 | 0.98 | 0.00 | 0.00 | 0.40 | 0.40 |
| Sat Flow, veh/h | | | | 706 | 2877 | 1497 | 1753 | 1870 | 0 | 0 | 1841 | 1560 |
| Grp Volume(v), veh/h | | | | 317 | 279 | 44 | 80 | 240 | 0 | 0 | 233 | 30 |
| Grp Sat Flow(s),veh/h/ln | | | | 1820 | 1763 | 1497 | 1753 | 1870 | 0 | 0 | 1841 | 1560 |
| Q Serve(g_s), s | | | | 12.4 | 11.1 | 1.8 | 2.6 | 0.3 | 0.0 | 0.0 | 8.7 | 1.2 |
| Cycle Q Clear(g_c), s | | | | 12.4 | 11.1 | 1.8 | 2.6 | 0.3 | 0.0 | 0.0 | 8.7 | 1.2 |
| Prop In Lane | | | | 0.39 | | 1.00 | 1.00 | | 0.00 | 0.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | | | | 746 | 723 | 614 | 487 | 916 | 0 | 0 | 734 | 622 |
| V/C Ratio(X) | | | | 0.42 | 0.39 | 0.07 | 0.16 | 0.26 | 0.00 | 0.00 | 0.32 | 0.05 |
| Avail Cap(c_a), veh/h | | | | 746 | 723 | 614 | 537 | 916 | 0 | 0 | 734 | 622 |
| HCM Platoon Ratio | | | | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | | | | 1.00 | 1.00 | 1.00 | 0.82 | 0.82 | 0.00 | 0.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | | | | 21.1 | 20.7 | 17.9 | 15.2 | 0.5 | 0.0 | 0.0 | 20.7 | 18.4 |
| Incr Delay (d2), s/veh | | | | 1.8 | 1.6 | 0.2 | 0.0 | 0.6 | 0.0 | 0.0 | 1.1 | 0.1 |
| Initial Q Delay(d3),s/veh | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | | | | 5.5 | 4.8 | 0.6 | 1.0 | 0.3 | 0.0 | 0.0 | 3.9 | 0.4 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | | | | 22.8 | 22.2 | 18.2 | 15.3 | 1.1 | 0.0 | 0.0 | 21.8 | 18.6 |
| LnGrp LOS | | | | C | C | B | B | A | A | A | C | B |
| Approach Vol, veh/h | | | | | 640 | | | 320 | | | 263 | |
| Approach Delay, s/veh | | | | | 22.3 | | | 4.6 | | | 21.5 | |
| Approach LOS | | | | | C | | | A | | | C | |
| Timer - Assigned Phs | 1 | 2 | | 4 | | 6 | | | | | | |
| Phs Duration (G+Y+Rc), s | 9.1 | 44.9 | | 46.0 | | 54.0 | | | | | | |
| Change Period (Y+Rc), s | 5.0 | 5.0 | | 5.0 | | 5.0 | | | | | | |
| Max Green Setting (Gmax), s | 7.0 | 37.0 | | 41.0 | | 49.0 | | | | | | |
| Max Q Clear Time (g_c+I1), s | 4.6 | 10.7 | | 14.4 | | 2.3 | | | | | | |
| Green Ext Time (p_c), s | 0.0 | 0.9 | | 2.5 | | 0.9 | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | | | | | | | | 17.5 | |
| HCM 6th LOS | | | | | | | | | | | B | |

HCM 6th Signalized Intersection Summary
 96: S Prince St & Main St

01/30/2024



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|-----|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | ↕↕ | ↗ | ↘ | ↑ | | | ↑ | ↗ |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 78 | 633 | 65 | 115 | 232 | 0 | 0 | 264 | 45 |
| Future Volume (veh/h) | 0 | 0 | 0 | 78 | 633 | 65 | 115 | 232 | 0 | 0 | 264 | 45 |
| Initial Q (Qb), veh | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | | | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | | | No | | | No | | | No | | |
| Adj Sat Flow, veh/h/ln | | | | 1885 | 1885 | 1885 | 1900 | 1885 | 0 | 0 | 1900 | 1900 |
| Adj Flow Rate, veh/h | | | | 81 | 659 | 68 | 120 | 242 | 0 | 0 | 275 | 47 |
| Peak Hour Factor | | | | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | | | | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| Cap, veh/h | | | | 157 | 1342 | 655 | 474 | 924 | 0 | 0 | 728 | 617 |
| Arrive On Green | | | | 0.41 | 0.41 | 0.41 | 0.11 | 0.98 | 0.00 | 0.00 | 0.38 | 0.38 |
| Sat Flow, veh/h | | | | 383 | 3274 | 1598 | 1810 | 1885 | 0 | 0 | 1900 | 1610 |
| Grp Volume(v), veh/h | | | | 395 | 345 | 68 | 120 | 242 | 0 | 0 | 275 | 47 |
| Grp Sat Flow(s),veh/h/ln | | | | 1866 | 1791 | 1598 | 1810 | 1885 | 0 | 0 | 1900 | 1610 |
| Q Serve(g_s), s | | | | 15.8 | 14.1 | 2.6 | 3.9 | 0.3 | 0.0 | 0.0 | 10.4 | 1.9 |
| Cycle Q Clear(g_c), s | | | | 15.8 | 14.1 | 2.6 | 3.9 | 0.3 | 0.0 | 0.0 | 10.4 | 1.9 |
| Prop In Lane | | | | 0.21 | | 1.00 | 1.00 | | 0.00 | 0.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | | | | 765 | 734 | 655 | 474 | 924 | 0 | 0 | 728 | 617 |
| V/C Ratio(X) | | | | 0.52 | 0.47 | 0.10 | 0.25 | 0.26 | 0.00 | 0.00 | 0.38 | 0.08 |
| Avail Cap(c_a), veh/h | | | | 765 | 734 | 655 | 498 | 924 | 0 | 0 | 728 | 617 |
| HCM Platoon Ratio | | | | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | | | | 1.00 | 1.00 | 1.00 | 0.83 | 0.83 | 0.00 | 0.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | | | | 22.1 | 21.6 | 18.2 | 15.5 | 0.5 | 0.0 | 0.0 | 22.2 | 19.6 |
| Incr Delay (d2), s/veh | | | | 2.5 | 2.2 | 0.3 | 0.1 | 0.6 | 0.0 | 0.0 | 1.5 | 0.2 |
| Initial Q Delay(d3),s/veh | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | | | | 7.3 | 6.2 | 1.0 | 1.5 | 0.3 | 0.0 | 0.0 | 4.9 | 0.7 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | | | | 24.6 | 23.7 | 18.5 | 15.6 | 1.1 | 0.0 | 0.0 | 23.7 | 19.8 |
| LnGrp LOS | | | | C | C | B | B | A | A | A | C | B |
| Approach Vol, veh/h | | | | | 808 | | | 362 | | | 322 | |
| Approach Delay, s/veh | | | | | 23.7 | | | 5.9 | | | 23.2 | |
| Approach LOS | | | | | C | | | A | | | C | |
| Timer - Assigned Phs | 1 | 2 | | 4 | | 6 | | | | | | |
| Phs Duration (G+Y+Rc), s | 10.7 | 43.3 | | 46.0 | | 54.0 | | | | | | |
| Change Period (Y+Rc), s | 5.0 | 5.0 | | 5.0 | | 5.0 | | | | | | |
| Max Green Setting (Gmax), s | 7.0 | 37.0 | | 41.0 | | 49.0 | | | | | | |
| Max Q Clear Time (g_c+I1), s | 5.9 | 12.4 | | 17.8 | | 2.3 | | | | | | |
| Green Ext Time (p_c), s | 0.0 | 1.1 | | 3.2 | | 0.9 | | | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 19.3 |
| HCM 6th LOS | B |

HCM 6th Signalized Intersection Summary
 96: S Prince St & Main St

01/30/2024



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|-----|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | ↕↕ | ↗ | ↖ | ↑ | | | ↑ | ↗ |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 82 | 586 | 71 | 107 | 161 | 0 | 0 | 176 | 61 |
| Future Volume (veh/h) | 0 | 0 | 0 | 82 | 586 | 71 | 107 | 161 | 0 | 0 | 176 | 61 |
| Initial Q (Qb), veh | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | | | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | | | No | | | No | | | No | | |
| Adj Sat Flow, veh/h/ln | | | | 1870 | 1885 | 1900 | 1885 | 1885 | 0 | 0 | 1885 | 1900 |
| Adj Flow Rate, veh/h | | | | 93 | 666 | 81 | 122 | 183 | 0 | 0 | 200 | 69 |
| Peak Hour Factor | | | | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Percent Heavy Veh, % | | | | 2 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 |
| Cap, veh/h | | | | 162 | 1219 | 608 | 549 | 964 | 0 | 0 | 748 | 639 |
| Arrive On Green | | | | 0.38 | 0.38 | 0.38 | 0.12 | 1.00 | 0.00 | 0.00 | 0.40 | 0.40 |
| Sat Flow, veh/h | | | | 428 | 3227 | 1610 | 1795 | 1885 | 0 | 0 | 1885 | 1610 |
| Grp Volume(v), veh/h | | | | 405 | 354 | 81 | 122 | 183 | 0 | 0 | 200 | 69 |
| Grp Sat Flow(s),veh/h/ln | | | | 1864 | 1791 | 1610 | 1795 | 1885 | 0 | 0 | 1885 | 1610 |
| Q Serve(g_s), s | | | | 15.5 | 13.8 | 3.0 | 3.5 | 0.0 | 0.0 | 0.0 | 6.4 | 2.4 |
| Cycle Q Clear(g_c), s | | | | 15.5 | 13.8 | 3.0 | 3.5 | 0.0 | 0.0 | 0.0 | 6.4 | 2.4 |
| Prop In Lane | | | | 0.23 | | 1.00 | 1.00 | | 0.00 | 0.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | | | | 704 | 677 | 608 | 549 | 964 | 0 | 0 | 748 | 639 |
| V/C Ratio(X) | | | | 0.58 | 0.52 | 0.13 | 0.22 | 0.19 | 0.00 | 0.00 | 0.27 | 0.11 |
| Avail Cap(c_a), veh/h | | | | 704 | 677 | 608 | 664 | 964 | 0 | 0 | 748 | 639 |
| HCM Platoon Ratio | | | | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | | | | 1.00 | 1.00 | 1.00 | 0.93 | 0.93 | 0.00 | 0.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | | | | 22.3 | 21.7 | 18.3 | 12.8 | 0.0 | 0.0 | 0.0 | 18.3 | 17.1 |
| Incr Delay (d2), s/veh | | | | 3.4 | 2.9 | 0.5 | 0.1 | 0.4 | 0.0 | 0.0 | 0.9 | 0.3 |
| Initial Q Delay(d3),s/veh | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | | | | 7.2 | 6.1 | 1.2 | 1.2 | 0.1 | 0.0 | 0.0 | 2.9 | 0.9 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | | | | 25.7 | 24.6 | 18.8 | 12.8 | 0.4 | 0.0 | 0.0 | 19.2 | 17.4 |
| LnGrp LOS | | | | C | C | B | B | A | A | A | B | B |
| Approach Vol, veh/h | | | | | 840 | | | 305 | | | 269 | |
| Approach Delay, s/veh | | | | | 24.5 | | | 5.4 | | | 18.7 | |
| Approach LOS | | | | | C | | | A | | | B | |
| Timer - Assigned Phs | 1 | 2 | | 4 | | 6 | | | | | | |
| Phs Duration (G+Y+Rc), s | 10.3 | 40.7 | | 39.0 | | 51.0 | | | | | | |
| Change Period (Y+Rc), s | 5.0 | 5.0 | | 5.0 | | 5.0 | | | | | | |
| Max Green Setting (Gmax), s | 11.0 | 30.0 | | 34.0 | | 46.0 | | | | | | |
| Max Q Clear Time (g_c+I1), s | 5.5 | 8.4 | | 17.5 | | 2.0 | | | | | | |
| Green Ext Time (p_c), s | 0.1 | 0.8 | | 3.0 | | 0.7 | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 19.3 | | | | | | | | |
| HCM 6th LOS | | | | B | | | | | | | | |

Existing Conditions - Synchro Results
Alamo Avenue & Prince Street

Existing AM
 HCM 6th Signalized Intersection Summary
 95: W Alamo Ave & S Prince St

01/21/2024



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|-----|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↑↑ | | | | | | ↑ | ↗ | ↘ | ↑ | |
| Traffic Volume (veh/h) | 35 | 663 | 147 | 0 | 0 | 0 | 0 | 234 | 117 | 98 | 198 | 0 |
| Future Volume (veh/h) | 35 | 663 | 147 | 0 | 0 | 0 | 0 | 234 | 117 | 98 | 198 | 0 |
| Initial Q (Qb), veh | 0 | 0 | 0 | | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | | | | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1811 | 1856 | 1885 | | | | 0 | 1885 | 1870 | 1841 | 1841 | 0 |
| Adj Flow Rate, veh/h | 40 | 762 | 169 | | | | 0 | 269 | 134 | 113 | 228 | 0 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | | | | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Percent Heavy Veh, % | 6 | 3 | 1 | | | | 0 | 1 | 2 | 4 | 4 | 0 |
| Cap, veh/h | 46 | 910 | 214 | | | | 0 | 566 | 476 | 622 | 1056 | 0 |
| Arrive On Green | 0.33 | 0.33 | 0.33 | | | | 0.00 | 0.30 | 0.30 | 0.45 | 1.00 | 0.00 |
| Sat Flow, veh/h | 141 | 2789 | 656 | | | | 0 | 1885 | 1585 | 1753 | 1841 | 0 |
| Grp Volume(v), veh/h | 523 | 0 | 448 | | | | 0 | 269 | 134 | 113 | 228 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1848 | 0 | 1737 | | | | 0 | 1885 | 1585 | 1753 | 1841 | 0 |
| Q Serve(g_s), s | 26.6 | 0.0 | 23.4 | | | | 0.0 | 11.7 | 6.5 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 26.6 | 0.0 | 23.4 | | | | 0.0 | 11.7 | 6.5 | 0.0 | 0.0 | 0.0 |
| Prop In Lane | 0.08 | | 0.38 | | | | 0.00 | | 1.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 603 | 0 | 567 | | | | 0 | 566 | 476 | 622 | 1056 | 0 |
| V/C Ratio(X) | 0.87 | 0.00 | 0.79 | | | | 0.00 | 0.48 | 0.28 | 0.18 | 0.22 | 0.00 |
| Avail Cap(c_a), veh/h | 832 | 0 | 782 | | | | 0 | 566 | 476 | 622 | 1056 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | | | | 0.00 | 1.00 | 1.00 | 0.96 | 0.96 | 0.00 |
| Uniform Delay (d), s/veh | 31.7 | 0.0 | 30.6 | | | | 0.0 | 28.6 | 26.8 | 14.6 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 5.7 | 0.0 | 2.5 | | | | 0.0 | 2.9 | 1.5 | 0.0 | 0.5 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 12.5 | 0.0 | 9.9 | | | | 0.0 | 5.6 | 2.6 | 1.2 | 0.1 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 37.3 | 0.0 | 33.0 | | | | 0.0 | 31.4 | 28.2 | 14.6 | 0.5 | 0.0 |
| LnGrp LOS | D | A | C | | | | A | C | C | B | A | A |
| Approach Vol, veh/h | | 971 | | | | | | 403 | | | 341 | |
| Approach Delay, s/veh | | 35.4 | | | | | | 30.4 | | | 5.1 | |
| Approach LOS | | D | | | | | | C | | | A | |
| Timer - Assigned Phs | | 2 | | | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 62.4 | | | 27.4 | 35.0 | | 37.6 | | | | |
| Change Period (Y+Rc), s | | 5.0 | | | 5.0 | * 5 | | 5.0 | | | | |
| Max Green Setting (Gmax), s | | 45.0 | | | 11.0 | * 30 | | 45.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 2.0 | | | 2.0 | 13.7 | | 28.6 | | | | |
| Green Ext Time (p_c), s | | 0.9 | | | 0.1 | 1.1 | | 4.0 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 28.2 |
| HCM 6th LOS | C |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Existing PM
 HCM 6th Signalized Intersection Summary
 95: W Alamo Ave & S Prince St

01/21/2024



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|-----|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↑↑ | | | | | | ↑ | ↗ | ↘ | ↑ | |
| Traffic Volume (veh/h) | 56 | 525 | 115 | 0 | 0 | 0 | 0 | 282 | 167 | 115 | 235 | 0 |
| Future Volume (veh/h) | 56 | 525 | 115 | 0 | 0 | 0 | 0 | 282 | 167 | 115 | 235 | 0 |
| Initial Q (Qb), veh | 0 | 0 | 0 | | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | | | | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1900 | 1885 | 1885 | | | | 0 | 1885 | 1885 | 1856 | 1885 | 0 |
| Adj Flow Rate, veh/h | 58 | 541 | 119 | | | | 0 | 291 | 172 | 119 | 242 | 0 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | | | | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | 0 | 1 | 1 | | | | 0 | 1 | 1 | 3 | 1 | 0 |
| Cap, veh/h | 69 | 664 | 154 | | | | 0 | 679 | 575 | 714 | 1238 | 0 |
| Arrive On Green | 0.24 | 0.24 | 0.24 | | | | 0.00 | 0.36 | 0.36 | 0.49 | 1.00 | 0.00 |
| Sat Flow, veh/h | 282 | 2727 | 633 | | | | 0 | 1885 | 1598 | 1767 | 1885 | 0 |
| Grp Volume(v), veh/h | 385 | 0 | 333 | | | | 0 | 291 | 172 | 119 | 242 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1871 | 0 | 1771 | | | | 0 | 1885 | 1598 | 1767 | 1885 | 0 |
| Q Serve(g_s), s | 19.6 | 0.0 | 17.5 | | | | 0.0 | 11.7 | 7.7 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 19.6 | 0.0 | 17.5 | | | | 0.0 | 11.7 | 7.7 | 0.0 | 0.0 | 0.0 |
| Prop In Lane | 0.15 | | 0.36 | | | | 0.00 | | 1.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 455 | 0 | 431 | | | | 0 | 679 | 575 | 714 | 1238 | 0 |
| V/C Ratio(X) | 0.85 | 0.00 | 0.77 | | | | 0.00 | 0.43 | 0.30 | 0.17 | 0.20 | 0.00 |
| Avail Cap(c_a), veh/h | 692 | 0 | 655 | | | | 0 | 679 | 575 | 714 | 1238 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 0.00 | 1.00 | | | | 0.00 | 1.00 | 1.00 | 0.93 | 0.93 | 0.00 |
| Uniform Delay (d), s/veh | 36.0 | 0.0 | 35.3 | | | | 0.0 | 24.2 | 23.0 | 10.3 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 3.8 | 0.0 | 1.3 | | | | 0.0 | 2.0 | 1.3 | 0.0 | 0.3 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 9.3 | 0.0 | 7.6 | | | | 0.0 | 5.5 | 3.1 | 1.0 | 0.1 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 39.8 | 0.0 | 36.6 | | | | 0.0 | 26.2 | 24.3 | 10.4 | 0.3 | 0.0 |
| LnGrp LOS | D | A | D | | | | A | C | C | B | A | A |
| Approach Vol, veh/h | | 718 | | | | | | 463 | | | 361 | |
| Approach Delay, s/veh | | 38.3 | | | | | | 25.5 | | | 3.6 | |
| Approach LOS | | D | | | | | | C | | | A | |
| Timer - Assigned Phs | | 2 | | | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 70.7 | | | 29.7 | 41.0 | | 29.3 | | | | |
| Change Period (Y+Rc), s | | 5.0 | | | 5.0 | 5.0 | | 5.0 | | | | |
| Max Green Setting (Gmax), s | | 53.0 | | | 12.0 | 36.0 | | 37.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 2.0 | | | 2.0 | 13.7 | | 21.6 | | | | |
| Green Ext Time (p_c), s | | 1.0 | | | 0.1 | 1.4 | | 2.7 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 26.4 | | | | | | | | | |
| HCM 6th LOS | | | C | | | | | | | | | |

Existing SAT
 HCM 6th Signalized Intersection Summary
 95: W Alamo Ave & S Prince St

01/21/2024



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|-----|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↑↑ | | | | | | ↑ | ↗ | ↘ | ↑ | |
| Traffic Volume (veh/h) | 90 | 516 | 106 | 0 | 0 | 0 | 0 | 174 | 124 | 122 | 147 | 0 |
| Future Volume (veh/h) | 90 | 516 | 106 | 0 | 0 | 0 | 0 | 174 | 124 | 122 | 147 | 0 |
| Initial Q (Qb), veh | 0 | 0 | 0 | | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | | | | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1900 | 1885 | 1885 | | | | 0 | 1885 | 1885 | 1870 | 1870 | 0 |
| Adj Flow Rate, veh/h | 98 | 561 | 115 | | | | 0 | 189 | 135 | 133 | 160 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | | | | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 0 | 1 | 1 | | | | 0 | 1 | 1 | 2 | 2 | 0 |
| Cap, veh/h | 117 | 699 | 151 | | | | 0 | 607 | 515 | 755 | 1166 | 0 |
| Arrive On Green | 0.27 | 0.27 | 0.27 | | | | 0.00 | 0.32 | 0.32 | 0.49 | 1.00 | 0.00 |
| Sat Flow, veh/h | 442 | 2636 | 569 | | | | 0 | 1885 | 1598 | 1781 | 1870 | 0 |
| Grp Volume(v), veh/h | 413 | 0 | 361 | | | | 0 | 189 | 135 | 133 | 160 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1863 | 0 | 1783 | | | | 0 | 1885 | 1598 | 1781 | 1870 | 0 |
| Q Serve(g_s), s | 18.9 | 0.0 | 16.8 | | | | 0.0 | 6.8 | 5.6 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 18.9 | 0.0 | 16.8 | | | | 0.0 | 6.8 | 5.6 | 0.0 | 0.0 | 0.0 |
| Prop In Lane | 0.24 | | 0.32 | | | | 0.00 | | 1.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 494 | 0 | 473 | | | | 0 | 607 | 515 | 755 | 1166 | 0 |
| V/C Ratio(X) | 0.84 | 0.00 | 0.76 | | | | 0.00 | 0.31 | 0.26 | 0.18 | 0.14 | 0.00 |
| Avail Cap(c_a), veh/h | 766 | 0 | 733 | | | | 0 | 607 | 515 | 755 | 1166 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | | | | 0.00 | 1.00 | 1.00 | 0.97 | 0.97 | 0.00 |
| Uniform Delay (d), s/veh | 31.2 | 0.0 | 30.4 | | | | 0.0 | 23.0 | 22.6 | 9.3 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 2.7 | 0.0 | 1.0 | | | | 0.0 | 1.3 | 1.2 | 0.0 | 0.2 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 8.6 | 0.0 | 7.1 | | | | 0.0 | 3.2 | 2.2 | 1.0 | 0.1 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 34.0 | 0.0 | 31.4 | | | | 0.0 | 24.3 | 23.8 | 9.3 | 0.2 | 0.0 |
| LnGrp LOS | C | A | C | | | | A | C | C | A | A | A |
| Approach Vol, veh/h | | 774 | | | | | | 324 | | | 293 | |
| Approach Delay, s/veh | | 32.8 | | | | | | 24.1 | | | 4.4 | |
| Approach LOS | | C | | | | | | C | | | A | |
| Timer - Assigned Phs | | 2 | | | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 61.1 | | | 27.1 | 34.0 | | 28.9 | | | | |
| Change Period (Y+Rc), s | | 5.0 | | | 5.0 | * 5 | | 5.0 | | | | |
| Max Green Setting (Gmax), s | | 43.0 | | | 10.0 | * 29 | | 37.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 2.0 | | | 2.0 | 8.8 | | 20.9 | | | | |
| Green Ext Time (p_c), s | | 0.6 | | | 0.1 | 0.9 | | 3.0 | | | | |

| Intersection Summary | | | | | | | | | | | | |
|----------------------|--|--|--|--|--|--|--|--|--|--|------|--|
| HCM 6th Ctrl Delay | | | | | | | | | | | 24.8 | |
| HCM 6th LOS | | | | | | | | | | | C | |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Prince Street Bike Lane Alternatives Analysis - Synchro Results
Chicane and The Network Concepts
Main Street & Prince Street

Prince Street Bike Lane Alternative AM
 HCM 6th Signalized Intersection Summary
 96: S Prince St & Main St

01/21/2024



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|-----|------|-----|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | ↑↑ | | ↑ | ↑ | | | ↑ | |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 103 | 397 | 37 | 67 | 202 | 0 | 0 | 196 | 25 |
| Future Volume (veh/h) | 0 | 0 | 0 | 103 | 397 | 37 | 67 | 202 | 0 | 0 | 196 | 25 |
| Initial Q (Qb), veh | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | | | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | | | No | | No | | No | | No | | No |
| Adj Sat Flow, veh/h/ln | | | | 1841 | 1856 | 1767 | 1841 | 1870 | 0 | 0 | 1841 | 1841 |
| Adj Flow Rate, veh/h | | | | 123 | 473 | 44 | 80 | 240 | 0 | 0 | 233 | 30 |
| Peak Hour Factor | | | | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 |
| Percent Heavy Veh, % | | | | 4 | 3 | 9 | 4 | 2 | 0 | 0 | 4 | 4 |
| Cap, veh/h | | | | 273 | 1108 | 107 | 470 | 916 | 0 | 0 | 637 | 82 |
| Arrive On Green | | | | 0.41 | 0.41 | 0.41 | 0.08 | 0.98 | 0.00 | 0.00 | 0.40 | 0.40 |
| Sat Flow, veh/h | | | | 667 | 2702 | 262 | 1753 | 1870 | 0 | 0 | 1598 | 206 |
| Grp Volume(v), veh/h | | | | 336 | 0 | 304 | 80 | 240 | 0 | 0 | 0 | 263 |
| Grp Sat Flow(s),veh/h/ln | | | | 1822 | 0 | 1808 | 1753 | 1870 | 0 | 0 | 0 | 1804 |
| Q Serve(g_s), s | | | | 13.3 | 0.0 | 11.9 | 2.6 | 0.3 | 0.0 | 0.0 | 0.0 | 10.3 |
| Cycle Q Clear(g_c), s | | | | 13.3 | 0.0 | 11.9 | 2.6 | 0.3 | 0.0 | 0.0 | 0.0 | 10.3 |
| Prop In Lane | | | | 0.37 | | 0.14 | 1.00 | | 0.00 | 0.00 | | 0.11 |
| Lane Grp Cap(c), veh/h | | | | 747 | 0 | 741 | 470 | 916 | 0 | 0 | 0 | 719 |
| V/C Ratio(X) | | | | 0.45 | 0.00 | 0.41 | 0.17 | 0.26 | 0.00 | 0.00 | 0.00 | 0.37 |
| Avail Cap(c_a), veh/h | | | | 747 | 0 | 741 | 520 | 916 | 0 | 0 | 0 | 719 |
| HCM Platoon Ratio | | | | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | | | | 1.00 | 0.00 | 1.00 | 0.82 | 0.82 | 0.00 | 0.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | | | | 21.3 | 0.0 | 20.9 | 15.4 | 0.5 | 0.0 | 0.0 | 0.0 | 21.2 |
| Incr Delay (d2), s/veh | | | | 2.0 | 0.0 | 1.7 | 0.1 | 0.6 | 0.0 | 0.0 | 0.0 | 1.4 |
| Initial Q Delay(d3),s/veh | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | | | | 6.0 | 0.0 | 5.3 | 1.0 | 0.3 | 0.0 | 0.0 | 0.0 | 4.5 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | | | | 23.3 | 0.0 | 22.6 | 15.5 | 1.1 | 0.0 | 0.0 | 0.0 | 22.6 |
| LnGrp LOS | | | | C | A | C | B | A | A | A | A | C |
| Approach Vol, veh/h | | | | | 640 | | | 320 | | | | 263 |
| Approach Delay, s/veh | | | | | 23.0 | | | 4.7 | | | | 22.6 |
| Approach LOS | | | | | C | | | A | | | | C |
| Timer - Assigned Phs | 1 | 2 | | 4 | | 6 | | | | | | |
| Phs Duration (G+Y+Rc), s | 9.1 | 44.9 | | 46.0 | | 54.0 | | | | | | |
| Change Period (Y+Rc), s | 5.0 | 5.0 | | 5.0 | | 5.0 | | | | | | |
| Max Green Setting (Gmax), s | 7.0 | 37.0 | | 41.0 | | 49.0 | | | | | | |
| Max Q Clear Time (g_c+I1), s | 4.6 | 12.3 | | 15.3 | | 2.3 | | | | | | |
| Green Ext Time (p_c), s | 0.0 | 1.0 | | 2.7 | | 0.9 | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | | 18.1 | | | | | | | |
| HCM 6th LOS | | | | | B | | | | | | | |

Prince Street Bike Lane Alternative PM
 HCM 6th Signalized Intersection Summary
 96: S Prince St & Main St

01/21/2024



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|-----|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | ↑↑ | | ↑ | ↑ | | | ↑ | |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 78 | 633 | 65 | 115 | 232 | 0 | 0 | 264 | 45 |
| Future Volume (veh/h) | 0 | 0 | 0 | 78 | 633 | 65 | 115 | 232 | 0 | 0 | 264 | 45 |
| Initial Q (Qb), veh | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | | | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | | | No | | | No | | | No | | |
| Adj Sat Flow, veh/h/ln | | | | 1885 | 1885 | 1885 | 1900 | 1885 | 0 | 0 | 1900 | 1900 |
| Adj Flow Rate, veh/h | | | | 81 | 659 | 68 | 120 | 242 | 0 | 0 | 275 | 47 |
| Peak Hour Factor | | | | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | | | | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| Cap, veh/h | | | | 145 | 1236 | 134 | 447 | 924 | 0 | 0 | 606 | 104 |
| Arrive On Green | | | | 0.41 | 0.41 | 0.41 | 0.11 | 0.98 | 0.00 | 0.00 | 0.38 | 0.38 |
| Sat Flow, veh/h | | | | 354 | 3014 | 326 | 1810 | 1885 | 0 | 0 | 1581 | 270 |
| Grp Volume(v), veh/h | | | | 427 | 0 | 381 | 120 | 242 | 0 | 0 | 0 | 322 |
| Grp Sat Flow(s),veh/h/ln | | | | 1867 | 0 | 1826 | 1810 | 1885 | 0 | 0 | 0 | 1851 |
| Q Serve(g_s), s | | | | 17.5 | 0.0 | 15.5 | 3.9 | 0.3 | 0.0 | 0.0 | 0.0 | 13.0 |
| Cycle Q Clear(g_c), s | | | | 17.5 | 0.0 | 15.5 | 3.9 | 0.3 | 0.0 | 0.0 | 0.0 | 13.0 |
| Prop In Lane | | | | 0.19 | | 0.18 | 1.00 | | 0.00 | 0.00 | | 0.15 |
| Lane Grp Cap(c), veh/h | | | | 766 | 0 | 749 | 447 | 924 | 0 | 0 | 0 | 709 |
| V/C Ratio(X) | | | | 0.56 | 0.00 | 0.51 | 0.27 | 0.26 | 0.00 | 0.00 | 0.00 | 0.45 |
| Avail Cap(c_a), veh/h | | | | 766 | 0 | 749 | 471 | 924 | 0 | 0 | 0 | 709 |
| HCM Platoon Ratio | | | | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | | | | 1.00 | 0.00 | 1.00 | 0.83 | 0.83 | 0.00 | 0.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | | | | 22.6 | 0.0 | 22.0 | 15.9 | 0.5 | 0.0 | 0.0 | 0.0 | 23.0 |
| Incr Delay (d2), s/veh | | | | 2.9 | 0.0 | 2.5 | 0.1 | 0.6 | 0.0 | 0.0 | 0.0 | 2.1 |
| Initial Q Delay(d3),s/veh | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | | | | 8.1 | 0.0 | 7.0 | 1.5 | 0.3 | 0.0 | 0.0 | 0.0 | 6.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | | | | 25.5 | 0.0 | 24.4 | 16.0 | 1.1 | 0.0 | 0.0 | 0.0 | 25.1 |
| LnGrp LOS | | | | C | A | C | B | A | A | A | A | C |
| Approach Vol, veh/h | | | | | 808 | | | 362 | | | 322 | |
| Approach Delay, s/veh | | | | | 25.0 | | | 6.0 | | | 25.1 | |
| Approach LOS | | | | | C | | | A | | | C | |
| Timer - Assigned Phs | 1 | 2 | | 4 | | 6 | | | | | | |
| Phs Duration (G+Y+Rc), s | 10.7 | 43.3 | | 46.0 | | 54.0 | | | | | | |
| Change Period (Y+Rc), s | 5.0 | 5.0 | | 5.0 | | 5.0 | | | | | | |
| Max Green Setting (Gmax), s | 7.0 | 37.0 | | 41.0 | | 49.0 | | | | | | |
| Max Q Clear Time (g_c+I1), s | 5.9 | 15.0 | | 19.5 | | 2.3 | | | | | | |
| Green Ext Time (p_c), s | 0.0 | 1.2 | | 3.4 | | 0.9 | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | | 20.4 | | | | | | | |
| HCM 6th LOS | | | | | C | | | | | | | |

Prince Street Bike Lane Alternative SAT
 HCM 6th Signalized Intersection Summary
 96: S Prince St & Main St

01/21/2024



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|-----|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | ↑↑ | | ↑ | ↑ | | | ↑ | |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 82 | 586 | 71 | 107 | 161 | 0 | 0 | 176 | 61 |
| Future Volume (veh/h) | 0 | 0 | 0 | 82 | 586 | 71 | 107 | 161 | 0 | 0 | 176 | 61 |
| Initial Q (Qb), veh | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | | | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | | | No | | | No | | | No | | |
| Adj Sat Flow, veh/h/ln | | | | 1870 | 1885 | 1900 | 1885 | 1885 | 0 | 0 | 1885 | 1900 |
| Adj Flow Rate, veh/h | | | | 93 | 666 | 81 | 122 | 183 | 0 | 0 | 200 | 69 |
| Peak Hour Factor | | | | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Percent Heavy Veh, % | | | | 2 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 |
| Cap, veh/h | | | | 147 | 1103 | 141 | 511 | 964 | 0 | 0 | 532 | 184 |
| Arrive On Green | | | | 0.38 | 0.38 | 0.38 | 0.12 | 1.00 | 0.00 | 0.00 | 0.40 | 0.40 |
| Sat Flow, veh/h | | | | 390 | 2921 | 373 | 1795 | 1885 | 0 | 0 | 1340 | 462 |
| Grp Volume(v), veh/h | | | | 445 | 0 | 395 | 122 | 183 | 0 | 0 | 0 | 269 |
| Grp Sat Flow(s),veh/h/ln | | | | 1866 | 0 | 1818 | 1795 | 1885 | 0 | 0 | 0 | 1802 |
| Q Serve(g_s), s | | | | 17.5 | 0.0 | 15.5 | 3.5 | 0.0 | 0.0 | 0.0 | 0.0 | 9.5 |
| Cycle Q Clear(g_c), s | | | | 17.5 | 0.0 | 15.5 | 3.5 | 0.0 | 0.0 | 0.0 | 0.0 | 9.5 |
| Prop In Lane | | | | 0.21 | | 0.21 | 1.00 | | 0.00 | 0.00 | | 0.26 |
| Lane Grp Cap(c), veh/h | | | | 705 | 0 | 687 | 511 | 964 | 0 | 0 | 0 | 715 |
| V/C Ratio(X) | | | | 0.63 | 0.00 | 0.57 | 0.24 | 0.19 | 0.00 | 0.00 | 0.00 | 0.38 |
| Avail Cap(c_a), veh/h | | | | 705 | 0 | 687 | 625 | 964 | 0 | 0 | 0 | 715 |
| HCM Platoon Ratio | | | | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(l) | | | | 1.00 | 0.00 | 1.00 | 0.93 | 0.93 | 0.00 | 0.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | | | | 22.9 | 0.0 | 22.3 | 13.1 | 0.0 | 0.0 | 0.0 | 0.0 | 19.2 |
| Incr Delay (d2), s/veh | | | | 4.3 | 0.0 | 3.5 | 0.1 | 0.4 | 0.0 | 0.0 | 0.0 | 1.5 |
| Initial Q Delay(d3),s/veh | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | | | | 8.2 | 0.0 | 7.0 | 1.2 | 0.1 | 0.0 | 0.0 | 0.0 | 4.2 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | | | | 27.1 | 0.0 | 25.7 | 13.2 | 0.4 | 0.0 | 0.0 | 0.0 | 20.7 |
| LnGrp LOS | | | | C | A | C | B | A | A | A | A | C |
| Approach Vol, veh/h | | | | | 840 | | | 305 | | | 269 | |
| Approach Delay, s/veh | | | | | 26.5 | | | 5.5 | | | 20.7 | |
| Approach LOS | | | | | C | | | A | | | C | |
| Timer - Assigned Phs | 1 | 2 | | 4 | | 6 | | | | | | |
| Phs Duration (G+Y+Rc), s | 10.3 | 40.7 | | 39.0 | | 51.0 | | | | | | |
| Change Period (Y+Rc), s | 5.0 | 5.0 | | 5.0 | | 5.0 | | | | | | |
| Max Green Setting (Gmax), s | 11.0 | 30.0 | | 34.0 | | 46.0 | | | | | | |
| Max Q Clear Time (g_c+I1), s | 5.5 | 11.5 | | 19.5 | | 2.0 | | | | | | |
| Green Ext Time (p_c), s | 0.1 | 1.0 | | 3.2 | | 0.7 | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | | | | | | | | 20.9 | |
| HCM 6th LOS | | | | | | | | | | | C | |

Prince Street Bike Lane Alternatives Analysis - Synchro Results
Chicane and The Network Concepts
Alamo Avenue & Prince Street

Prince Street Bike Lane Alternative - AM
 HCM 6th Signalized Intersection Summary
 95: W Alamo Ave & S Prince St

01/21/2024



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--|------|------|------|-----|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↑↑ | | | | | | ↑ | | ↑ | ↑ | |
| Traffic Volume (veh/h) | 35 | 663 | 147 | 0 | 0 | 0 | 0 | 234 | 117 | 98 | 198 | 0 |
| Future Volume (veh/h) | 35 | 663 | 147 | 0 | 0 | 0 | 0 | 234 | 117 | 98 | 198 | 0 |
| Initial Q (Qb), veh | 0 | 0 | 0 | | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | | | | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1811 | 1856 | 1885 | | | | 0 | 1885 | 1870 | 1841 | 1841 | 0 |
| Adj Flow Rate, veh/h | 40 | 762 | 169 | | | | 0 | 269 | 134 | 113 | 228 | 0 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | | | | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Percent Heavy Veh, % | 6 | 3 | 1 | | | | 0 | 1 | 2 | 4 | 4 | 0 |
| Cap, veh/h | 46 | 910 | 214 | | | | 0 | 356 | 177 | 537 | 1056 | 0 |
| Arrive On Green | 0.33 | 0.33 | 0.33 | | | | 0.00 | 0.30 | 0.30 | 0.45 | 1.00 | 0.00 |
| Sat Flow, veh/h | 141 | 2789 | 656 | | | | 0 | 1187 | 591 | 1753 | 1841 | 0 |
| Grp Volume(v), veh/h | 523 | 0 | 448 | | | | 0 | 0 | 403 | 113 | 228 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1848 | 0 | 1737 | | | | 0 | 0 | 1779 | 1753 | 1841 | 0 |
| Q Serve(g_s), s | 26.6 | 0.0 | 23.4 | | | | 0.0 | 0.0 | 20.5 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 26.6 | 0.0 | 23.4 | | | | 0.0 | 0.0 | 20.5 | 0.0 | 0.0 | 0.0 |
| Prop In Lane | 0.08 | | 0.38 | | | | 0.00 | | 0.33 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 603 | 0 | 567 | | | | 0 | 0 | 534 | 537 | 1056 | 0 |
| V/C Ratio(X) | 0.87 | 0.00 | 0.79 | | | | 0.00 | 0.00 | 0.76 | 0.21 | 0.22 | 0.00 |
| Avail Cap(c_a), veh/h | 832 | 0 | 782 | | | | 0 | 0 | 534 | 537 | 1056 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 0.00 | 1.00 | | | | 0.00 | 0.00 | 1.00 | 0.94 | 0.94 | 0.00 |
| Uniform Delay (d), s/veh | 31.7 | 0.0 | 30.6 | | | | 0.0 | 0.0 | 31.7 | 19.1 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 5.7 | 0.0 | 2.5 | | | | 0.0 | 0.0 | 9.6 | 0.1 | 0.4 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 12.5 | 0.0 | 9.9 | | | | 0.0 | 0.0 | 10.0 | 1.5 | 0.1 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 37.3 | 0.0 | 33.0 | | | | 0.0 | 0.0 | 41.3 | 19.2 | 0.4 | 0.0 |
| LnGrp LOS | D | A | C | | | | A | A | D | B | A | A |
| Approach Vol, veh/h | | 971 | | | | | | 403 | | | 341 | |
| Approach Delay, s/veh | | 35.4 | | | | | | 41.3 | | | 6.6 | |
| Approach LOS | | D | | | | | | D | | | A | |
| Timer - Assigned Phs | | 2 | | | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 62.4 | | | 27.4 | 35.0 | | 37.6 | | | | |
| Change Period (Y+Rc), s | | 5.0 | | | 5.0 | * 5 | | 5.0 | | | | |
| Max Green Setting (Gmax), s | | 45.0 | | | 11.0 | * 30 | | 45.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 2.0 | | | 2.0 | 22.5 | | 28.6 | | | | |
| Green Ext Time (p_c), s | | 0.9 | | | 0.1 | 1.0 | | 4.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 31.0 | | | | | | | | | |
| HCM 6th LOS | | | C | | | | | | | | | |
| Notes | | | | | | | | | | | | |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. | | | | | | | | | | | | |

Prince Street Bike Lane Alternative - PM
 HCM 6th Signalized Intersection Summary
 95: W Alamo Ave & S Prince St

01/21/2024



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|-----|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↑↑ | | | | | | ↑ | | ↑ | ↑ | |
| Traffic Volume (veh/h) | 56 | 525 | 115 | 0 | 0 | 0 | 0 | 282 | 167 | 115 | 235 | 0 |
| Future Volume (veh/h) | 56 | 525 | 115 | 0 | 0 | 0 | 0 | 282 | 167 | 115 | 235 | 0 |
| Initial Q (Qb), veh | 0 | 0 | 0 | | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | | | | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1900 | 1885 | 1885 | | | | 0 | 1885 | 1885 | 1856 | 1885 | 0 |
| Adj Flow Rate, veh/h | 58 | 541 | 119 | | | | 0 | 291 | 172 | 119 | 242 | 0 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | | | | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Percent Heavy Veh, % | 0 | 1 | 1 | | | | 0 | 1 | 1 | 3 | 1 | 0 |
| Cap, veh/h | 69 | 664 | 154 | | | | 0 | 400 | 236 | 612 | 1238 | 0 |
| Arrive On Green | 0.24 | 0.24 | 0.24 | | | | 0.00 | 0.36 | 0.36 | 0.49 | 1.00 | 0.00 |
| Sat Flow, veh/h | 282 | 2727 | 633 | | | | 0 | 1111 | 656 | 1767 | 1885 | 0 |
| Grp Volume(v), veh/h | 385 | 0 | 333 | | | | 0 | 0 | 463 | 119 | 242 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1871 | 0 | 1771 | | | | 0 | 0 | 1767 | 1767 | 1885 | 0 |
| Q Serve(g_s), s | 19.6 | 0.0 | 17.5 | | | | 0.0 | 0.0 | 22.7 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 19.6 | 0.0 | 17.5 | | | | 0.0 | 0.0 | 22.7 | 0.0 | 0.0 | 0.0 |
| Prop In Lane | 0.15 | | 0.36 | | | | 0.00 | | 0.37 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 455 | 0 | 431 | | | | 0 | 0 | 636 | 612 | 1238 | 0 |
| V/C Ratio(X) | 0.85 | 0.00 | 0.77 | | | | 0.00 | 0.00 | 0.73 | 0.19 | 0.20 | 0.00 |
| Avail Cap(c_a), veh/h | 692 | 0 | 655 | | | | 0 | 0 | 636 | 612 | 1238 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 0.00 | 1.00 | | | | 0.00 | 0.00 | 1.00 | 0.89 | 0.89 | 0.00 |
| Uniform Delay (d), s/veh | 36.0 | 0.0 | 35.3 | | | | 0.0 | 0.0 | 27.8 | 15.1 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 3.8 | 0.0 | 1.3 | | | | 0.0 | 0.0 | 7.1 | 0.1 | 0.3 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 9.3 | 0.0 | 7.6 | | | | 0.0 | 0.0 | 10.6 | 1.3 | 0.1 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 39.8 | 0.0 | 36.6 | | | | 0.0 | 0.0 | 34.9 | 15.2 | 0.3 | 0.0 |
| LnGrp LOS | D | A | D | | | | A | A | C | B | A | A |
| Approach Vol, veh/h | | 718 | | | | | | 463 | | | 361 | |
| Approach Delay, s/veh | | 38.3 | | | | | | 34.9 | | | 5.2 | |
| Approach LOS | | D | | | | | | C | | | A | |
| Timer - Assigned Phs | | 2 | | | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 70.7 | | | 29.7 | 41.0 | | 29.3 | | | | |
| Change Period (Y+Rc), s | | 5.0 | | | 5.0 | 5.0 | | 5.0 | | | | |
| Max Green Setting (Gmax), s | | 53.0 | | | 12.0 | 36.0 | | 37.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 2.0 | | | 2.0 | 24.7 | | 21.6 | | | | |
| Green Ext Time (p_c), s | | 1.0 | | | 0.1 | 1.6 | | 2.7 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 29.5 | | | | | | | | | |
| HCM 6th LOS | | | C | | | | | | | | | |

Prince Street Bike Lane Alternative - SAT
 HCM 6th Signalized Intersection Summary
 95: W Alamo Ave & S Prince St

01/21/2024



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|-----|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↑↑ | | | | | | ↑ | | ↑ | ↑ | |
| Traffic Volume (veh/h) | 90 | 516 | 106 | 0 | 0 | 0 | 0 | 174 | 124 | 122 | 147 | 0 |
| Future Volume (veh/h) | 90 | 516 | 106 | 0 | 0 | 0 | 0 | 174 | 124 | 122 | 147 | 0 |
| Initial Q (Qb), veh | 0 | 0 | 0 | | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | | | | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1900 | 1885 | 1885 | | | | 0 | 1885 | 1885 | 1870 | 1870 | 0 |
| Adj Flow Rate, veh/h | 98 | 561 | 115 | | | | 0 | 189 | 135 | 133 | 160 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | | | | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 0 | 1 | 1 | | | | 0 | 1 | 1 | 2 | 2 | 0 |
| Cap, veh/h | 117 | 699 | 151 | | | | 0 | 330 | 235 | 672 | 1166 | 0 |
| Arrive On Green | 0.27 | 0.27 | 0.27 | | | | 0.00 | 0.32 | 0.32 | 0.49 | 1.00 | 0.00 |
| Sat Flow, veh/h | 442 | 2636 | 569 | | | | 0 | 1023 | 731 | 1781 | 1870 | 0 |
| Grp Volume(v), veh/h | 413 | 0 | 361 | | | | 0 | 0 | 324 | 133 | 160 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1863 | 0 | 1783 | | | | 0 | 0 | 1754 | 1781 | 1870 | 0 |
| Q Serve(g_s), s | 18.9 | 0.0 | 16.8 | | | | 0.0 | 0.0 | 13.8 | 0.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 18.9 | 0.0 | 16.8 | | | | 0.0 | 0.0 | 13.8 | 0.0 | 0.0 | 0.0 |
| Prop In Lane | 0.24 | | 0.32 | | | | 0.00 | | 0.42 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 494 | 0 | 473 | | | | 0 | 0 | 565 | 672 | 1166 | 0 |
| V/C Ratio(X) | 0.84 | 0.00 | 0.76 | | | | 0.00 | 0.00 | 0.57 | 0.20 | 0.14 | 0.00 |
| Avail Cap(c_a), veh/h | 766 | 0 | 733 | | | | 0 | 0 | 565 | 672 | 1166 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 |
| Upstream Filter(l) | 1.00 | 0.00 | 1.00 | | | | 0.00 | 0.00 | 1.00 | 0.93 | 0.93 | 0.00 |
| Uniform Delay (d), s/veh | 31.2 | 0.0 | 30.4 | | | | 0.0 | 0.0 | 25.4 | 12.2 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 2.7 | 0.0 | 1.0 | | | | 0.0 | 0.0 | 4.2 | 0.0 | 0.2 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 8.6 | 0.0 | 7.1 | | | | 0.0 | 0.0 | 6.2 | 1.2 | 0.1 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 34.0 | 0.0 | 31.4 | | | | 0.0 | 0.0 | 29.5 | 12.3 | 0.2 | 0.0 |
| LnGrp LOS | C | A | C | | | | A | A | C | B | A | A |
| Approach Vol, veh/h | | 774 | | | | | | 324 | | | 293 | |
| Approach Delay, s/veh | | 32.8 | | | | | | 29.5 | | | 5.7 | |
| Approach LOS | | C | | | | | | C | | | A | |
| Timer - Assigned Phs | | 2 | | | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 61.1 | | | 27.1 | 34.0 | | 28.9 | | | | |
| Change Period (Y+Rc), s | | 5.0 | | | 5.0 | 5.0 | | 5.0 | | | | |
| Max Green Setting (Gmax), s | | 43.0 | | | 9.0 | 29.0 | | 37.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 2.0 | | | 2.0 | 15.8 | | 20.9 | | | | |
| Green Ext Time (p_c), s | | 0.6 | | | 0.1 | 1.1 | | 3.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 26.3 | | | | | | | | | |
| HCM 6th LOS | | | C | | | | | | | | | |

Westbound Right-Turn Lane Removal - Synchro Results
The Village Concept
Main Street & Prince Street

HCM 6th Signalized Intersection Summary
 96: S Prince St & Main St

01/30/2024



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|-----|------|-----|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | ↕↕ | | ↗ | ↖ | | | ↖ | ↗ |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 103 | 397 | 37 | 67 | 202 | 0 | 0 | 196 | 25 |
| Future Volume (veh/h) | 0 | 0 | 0 | 103 | 397 | 37 | 67 | 202 | 0 | 0 | 196 | 25 |
| Initial Q (Qb), veh | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | | | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | | | No | | No | | No | | No | | No |
| Adj Sat Flow, veh/h/ln | | | | 1841 | 1856 | 1767 | 1841 | 1870 | 0 | 0 | 1841 | 1841 |
| Adj Flow Rate, veh/h | | | | 123 | 473 | 44 | 80 | 240 | 0 | 0 | 233 | 30 |
| Peak Hour Factor | | | | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 |
| Percent Heavy Veh, % | | | | 4 | 3 | 9 | 4 | 2 | 0 | 0 | 4 | 4 |
| Cap, veh/h | | | | 273 | 1108 | 107 | 487 | 916 | 0 | 0 | 734 | 622 |
| Arrive On Green | | | | 0.41 | 0.41 | 0.41 | 0.08 | 0.98 | 0.00 | 0.00 | 0.40 | 0.40 |
| Sat Flow, veh/h | | | | 667 | 2702 | 262 | 1753 | 1870 | 0 | 0 | 1841 | 1560 |
| Grp Volume(v), veh/h | | | | 336 | 0 | 304 | 80 | 240 | 0 | 0 | 233 | 30 |
| Grp Sat Flow(s),veh/h/ln | | | | 1822 | 0 | 1808 | 1753 | 1870 | 0 | 0 | 1841 | 1560 |
| Q Serve(g_s), s | | | | 13.3 | 0.0 | 11.9 | 2.6 | 0.3 | 0.0 | 0.0 | 8.7 | 1.2 |
| Cycle Q Clear(g_c), s | | | | 13.3 | 0.0 | 11.9 | 2.6 | 0.3 | 0.0 | 0.0 | 8.7 | 1.2 |
| Prop In Lane | | | | 0.37 | | 0.14 | 1.00 | | 0.00 | 0.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | | | | 747 | 0 | 741 | 487 | 916 | 0 | 0 | 734 | 622 |
| V/C Ratio(X) | | | | 0.45 | 0.00 | 0.41 | 0.16 | 0.26 | 0.00 | 0.00 | 0.32 | 0.05 |
| Avail Cap(c_a), veh/h | | | | 747 | 0 | 741 | 537 | 916 | 0 | 0 | 734 | 622 |
| HCM Platoon Ratio | | | | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | | | | 1.00 | 0.00 | 1.00 | 0.82 | 0.82 | 0.00 | 0.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | | | | 21.3 | 0.0 | 20.9 | 15.2 | 0.5 | 0.0 | 0.0 | 20.7 | 18.4 |
| Incr Delay (d2), s/veh | | | | 2.0 | 0.0 | 1.7 | 0.0 | 0.6 | 0.0 | 0.0 | 1.1 | 0.1 |
| Initial Q Delay(d3),s/veh | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | | | | 6.0 | 0.0 | 5.3 | 1.0 | 0.3 | 0.0 | 0.0 | 3.9 | 0.4 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | | | | 23.3 | 0.0 | 22.6 | 15.3 | 1.1 | 0.0 | 0.0 | 21.8 | 18.6 |
| LnGrp LOS | | | | C | A | C | B | A | A | A | C | B |
| Approach Vol, veh/h | | | | | 640 | | | 320 | | | 263 | |
| Approach Delay, s/veh | | | | | 23.0 | | | 4.6 | | | 21.5 | |
| Approach LOS | | | | | C | | | A | | | C | |
| Timer - Assigned Phs | 1 | 2 | | 4 | | 6 | | | | | | |
| Phs Duration (G+Y+Rc), s | 9.1 | 44.9 | | 46.0 | | 54.0 | | | | | | |
| Change Period (Y+Rc), s | 5.0 | 5.0 | | 5.0 | | 5.0 | | | | | | |
| Max Green Setting (Gmax), s | 7.0 | 37.0 | | 41.0 | | 49.0 | | | | | | |
| Max Q Clear Time (g_c+I1), s | 4.6 | 10.7 | | 15.3 | | 2.3 | | | | | | |
| Green Ext Time (p_c), s | 0.0 | 0.9 | | 2.7 | | 0.9 | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | | | | | | | | 17.8 | |
| HCM 6th LOS | | | | | | | | | | | B | |

HCM 6th Signalized Intersection Summary
 96: S Prince St & Main St

01/30/2024



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|-----|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | ↕↕ | | ↕ | ↑ | | | ↑ | ↕ |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 78 | 633 | 65 | 115 | 232 | 0 | 0 | 264 | 45 |
| Future Volume (veh/h) | 0 | 0 | 0 | 78 | 633 | 65 | 115 | 232 | 0 | 0 | 264 | 45 |
| Initial Q (Qb), veh | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | | | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | | | No | | | No | | | No | | |
| Adj Sat Flow, veh/h/ln | | | | 1885 | 1885 | 1885 | 1900 | 1885 | 0 | 0 | 1900 | 1900 |
| Adj Flow Rate, veh/h | | | | 81 | 659 | 68 | 120 | 242 | 0 | 0 | 275 | 47 |
| Peak Hour Factor | | | | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | | | | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| Cap, veh/h | | | | 145 | 1236 | 134 | 474 | 924 | 0 | 0 | 728 | 617 |
| Arrive On Green | | | | 0.41 | 0.41 | 0.41 | 0.11 | 0.98 | 0.00 | 0.00 | 0.38 | 0.38 |
| Sat Flow, veh/h | | | | 354 | 3014 | 326 | 1810 | 1885 | 0 | 0 | 1900 | 1610 |
| Grp Volume(v), veh/h | | | | 427 | 0 | 381 | 120 | 242 | 0 | 0 | 275 | 47 |
| Grp Sat Flow(s),veh/h/ln | | | | 1867 | 0 | 1826 | 1810 | 1885 | 0 | 0 | 1900 | 1610 |
| Q Serve(g_s), s | | | | 17.5 | 0.0 | 15.5 | 3.9 | 0.3 | 0.0 | 0.0 | 10.4 | 1.9 |
| Cycle Q Clear(g_c), s | | | | 17.5 | 0.0 | 15.5 | 3.9 | 0.3 | 0.0 | 0.0 | 10.4 | 1.9 |
| Prop In Lane | | | | 0.19 | | 0.18 | 1.00 | | 0.00 | 0.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | | | | 766 | 0 | 749 | 474 | 924 | 0 | 0 | 728 | 617 |
| V/C Ratio(X) | | | | 0.56 | 0.00 | 0.51 | 0.25 | 0.26 | 0.00 | 0.00 | 0.38 | 0.08 |
| Avail Cap(c_a), veh/h | | | | 766 | 0 | 749 | 498 | 924 | 0 | 0 | 728 | 617 |
| HCM Platoon Ratio | | | | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | | | | 1.00 | 0.00 | 1.00 | 0.83 | 0.83 | 0.00 | 0.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | | | | 22.6 | 0.0 | 22.0 | 15.5 | 0.5 | 0.0 | 0.0 | 22.2 | 19.6 |
| Incr Delay (d2), s/veh | | | | 2.9 | 0.0 | 2.5 | 0.1 | 0.6 | 0.0 | 0.0 | 1.5 | 0.2 |
| Initial Q Delay(d3),s/veh | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | | | | 8.1 | 0.0 | 7.0 | 1.5 | 0.3 | 0.0 | 0.0 | 4.9 | 0.7 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | | | | 25.5 | 0.0 | 24.4 | 15.6 | 1.1 | 0.0 | 0.0 | 23.7 | 19.8 |
| LnGrp LOS | | | | C | A | C | B | A | A | A | C | B |
| Approach Vol, veh/h | | | | | 808 | | | 362 | | | 322 | |
| Approach Delay, s/veh | | | | | 25.0 | | | 5.9 | | | 23.2 | |
| Approach LOS | | | | | C | | | A | | | C | |
| Timer - Assigned Phs | 1 | 2 | | 4 | | 6 | | | | | | |
| Phs Duration (G+Y+Rc), s | 10.7 | 43.3 | | 46.0 | | 54.0 | | | | | | |
| Change Period (Y+Rc), s | 5.0 | 5.0 | | 5.0 | | 5.0 | | | | | | |
| Max Green Setting (Gmax), s | 7.0 | 37.0 | | 41.0 | | 49.0 | | | | | | |
| Max Q Clear Time (g_c+I1), s | 5.9 | 12.4 | | 19.5 | | 2.3 | | | | | | |
| Green Ext Time (p_c), s | 0.0 | 1.1 | | 3.4 | | 0.9 | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | | 20.0 | | | | | | | |
| HCM 6th LOS | | | | | B | | | | | | | |

HCM 6th Signalized Intersection Summary

96: S Prince St & Main St

01/30/2024



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|-----|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | ↕↕ | | ↗ | ↖ | | | ↖ | ↗ |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 82 | 586 | 71 | 107 | 161 | 0 | 0 | 176 | 61 |
| Future Volume (veh/h) | 0 | 0 | 0 | 82 | 586 | 71 | 107 | 161 | 0 | 0 | 176 | 61 |
| Initial Q (Qb), veh | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | | | | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | | | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | | | No | | | No | | | No | | |
| Adj Sat Flow, veh/h/ln | | | | 1870 | 1885 | 1900 | 1885 | 1885 | 0 | 0 | 1885 | 1900 |
| Adj Flow Rate, veh/h | | | | 93 | 666 | 81 | 122 | 183 | 0 | 0 | 200 | 69 |
| Peak Hour Factor | | | | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Percent Heavy Veh, % | | | | 2 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 |
| Cap, veh/h | | | | 147 | 1103 | 141 | 549 | 964 | 0 | 0 | 748 | 639 |
| Arrive On Green | | | | 0.38 | 0.38 | 0.38 | 0.12 | 1.00 | 0.00 | 0.00 | 0.40 | 0.40 |
| Sat Flow, veh/h | | | | 390 | 2921 | 373 | 1795 | 1885 | 0 | 0 | 1885 | 1610 |
| Grp Volume(v), veh/h | | | | 445 | 0 | 395 | 122 | 183 | 0 | 0 | 200 | 69 |
| Grp Sat Flow(s),veh/h/ln | | | | 1866 | 0 | 1818 | 1795 | 1885 | 0 | 0 | 1885 | 1610 |
| Q Serve(g_s), s | | | | 17.5 | 0.0 | 15.5 | 3.5 | 0.0 | 0.0 | 0.0 | 6.4 | 2.4 |
| Cycle Q Clear(g_c), s | | | | 17.5 | 0.0 | 15.5 | 3.5 | 0.0 | 0.0 | 0.0 | 6.4 | 2.4 |
| Prop In Lane | | | | 0.21 | | 0.21 | 1.00 | | 0.00 | 0.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | | | | 705 | 0 | 687 | 549 | 964 | 0 | 0 | 748 | 639 |
| V/C Ratio(X) | | | | 0.63 | 0.00 | 0.57 | 0.22 | 0.19 | 0.00 | 0.00 | 0.27 | 0.11 |
| Avail Cap(c_a), veh/h | | | | 705 | 0 | 687 | 664 | 964 | 0 | 0 | 748 | 639 |
| HCM Platoon Ratio | | | | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | | | | 1.00 | 0.00 | 1.00 | 0.93 | 0.93 | 0.00 | 0.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | | | | 22.9 | 0.0 | 22.3 | 12.8 | 0.0 | 0.0 | 0.0 | 18.3 | 17.1 |
| Incr Delay (d2), s/veh | | | | 4.3 | 0.0 | 3.5 | 0.1 | 0.4 | 0.0 | 0.0 | 0.9 | 0.3 |
| Initial Q Delay(d3),s/veh | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | | | | 8.2 | 0.0 | 7.0 | 1.2 | 0.1 | 0.0 | 0.0 | 2.9 | 0.9 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | | | | 27.1 | 0.0 | 25.7 | 12.8 | 0.4 | 0.0 | 0.0 | 19.2 | 17.4 |
| LnGrp LOS | | | | C | A | C | B | A | A | A | B | B |
| Approach Vol, veh/h | | | | | 840 | | | 305 | | | 269 | |
| Approach Delay, s/veh | | | | | 26.5 | | | 5.4 | | | 18.7 | |
| Approach LOS | | | | | C | | | A | | | B | |
| Timer - Assigned Phs | 1 | 2 | | 4 | | 6 | | | | | | |
| Phs Duration (G+Y+Rc), s | 10.3 | 40.7 | | 39.0 | | 51.0 | | | | | | |
| Change Period (Y+Rc), s | 5.0 | 5.0 | | 5.0 | | 5.0 | | | | | | |
| Max Green Setting (Gmax), s | 11.0 | 30.0 | | 34.0 | | 46.0 | | | | | | |
| Max Q Clear Time (g_c+I1), s | 5.5 | 8.4 | | 19.5 | | 2.0 | | | | | | |
| Green Ext Time (p_c), s | 0.1 | 0.8 | | 3.2 | | 0.7 | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | | | | | | | | 20.5 | |
| HCM 6th LOS | | | | | | | | | | | C | |